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# Industry and services in growth and structural change in India: some unexplored features

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INDUSTRY AND SERVICES IN GROWTH  
AND STRUCTURAL CHANGE IN INDIA  
Some Unexplored Features

Surajit Mazumdar

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STRUCTURAL CHANGE IN INDIA**  
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## CONTENTS

<i>Abstract</i>	1
1. Growth, Structural Change and the Indian Economy: A Brief Introductory Overview	2
2. Data Sources	5
3. The Issue of Industrial Classification	6
4. The Mid-1960s Collapse: The Beginning of the End of Industrialization Centred Growth and Structural Change?	13
5. Services Dominated Growth: The Transition from Public to Private Sector Led	16
6. Phases of Growth and Structural Change: A Summing Up	23
References	26

### *List of Figures*

<i>Figure 1</i>	Percentage Share of Industry and its Components in GDP at Current Prices	8
<i>Figure 2</i>	Percentage Share of Registered and Unregistered Manufacturing in GDP at Current Prices	8
<i>Figure 3</i>	Percentage Share of Industry and its Components in GDP at 1999–00 Prices	10
<i>Figure 4</i>	Percentage Share of Registered and Unregistered Manufacturing in GDP at 1999–00 Prices	10
<i>Figure 5</i>	Ratio of Services GDP to Industrial GDP at Current Prices	12
<i>Figure 6</i>	Ratio of Services GDP to Industrial GDP at 1999–00 Prices	12
<i>Figure 7</i>	Average Growth Rate over 15-Year Period in Year Ending 1964–65 to 2007–08 (GDP at 1999–00 prices) – 1	14
<i>Figure 8</i>	Average Growth Rate over 15-Year Period in Year Ending 1964–65 to 2007–08 (GDP at 1999–00 prices) – 2	15
<i>Figure 9</i>	Average Growth Rate over 15-Year Period in Year Ending 1964–65 to 2007–08 (GDP at 1999–00 prices) – 3	15

<i>Figure 10</i>	Distribution of Unorganized Sector NDP at Current Prices	16
<i>Figure 11</i>	Distribution of Organized Sector NDP at Current Prices	17
<i>Figure 12</i>	Shares in Public Sector NDP	18
<i>Figure 13</i>	Shares in Private Organized NDP	18
<i>Figure 14</i>	Ratio of Private Organized NDP to Public Sector NDP	19
<i>Figure 15</i>	Shares in Non-Agricultural NDP	20
<i>Figure 16</i>	Shares in Services 1 NDP	20
<i>Figure 17</i>	Shares in Services 2 NDP	21
<i>Figure 18</i>	Distribution of Services 1 GDP at Current Prices	22
<i>Figure 19</i>	Distribution of GDP at Current Prices from Real estate, Ownership of Dwellings and Business Services	22
<i>Figure 20</i>	Ratio of Private Sector GDP to Public Sector GDP at Current Prices in Communication	23

#### *List of Tables*

<i>Table 1</i>	Percentage Shares in GDP at Current Prices	9
<i>Table 2</i>	Percentage Shares in GDP at 1999–00 Prices	11
<i>Table 3</i>	Contribution to Point-to-Point Increase in GDP	13

# INDUSTRY AND SERVICES IN GROWTH AND STRUCTURAL CHANGE IN INDIA

## Some Unexplored Features

*Surajit Mazumdar\**

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*[Abstract: This paper briefly presents an analytical description of the twin processes of growth of output and change in its composition in the Indian economy since independence, by looking at the time-paths of the two dimensions simultaneously. It suggests that three turning points located respectively in the mid-1960s, 1980, and the mid-1990s separate the entire period after independence into four sequential phases of growth and structural change. This periodization of India's post-independence economic history points towards the need to go beyond relating the dynamics of the Indian economy to exclusively the degree to which the prevalent economic policy regime was interventionist or liberal in different periods.]*

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This paper briefly presents an analytical description of the twin processes of growth of output and change in its composition in the Indian economy since independence. The emphasis is on description, and whatever interpretation is involved relates to mainly how the six-decade long story is presented. Its purpose is to add some twists in the known tales of post-independence growth and structural change in and their key turning points by looking at the time-paths of the two dimensions simultaneously. This can bring out in sharper relief some of the key questions posed by what appears to have been a rather uniquely Indian trajectory of economic change. The paper suggests that three turning points located respectively in the mid-1960s, 1980, and the mid-1990s separate the entire period after independence into four sequential phases of growth and structural change. The period before 1980 was characterized by a relatively slower pace of aggregate growth than the one after, but at the same time it was the period in which the

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\* [The author is a Professor at the Institute]. This paper has come out of an ongoing Indian Council of Social Science Research sponsored research study at the ISID on "Structural Changes, Industry and Employment in the Indian Economy: Macro Economic Implications of the Emerging Trends". I am grateful for the comments and suggestions offered by my colleagues when this paper was presented at the Institute. I am especially indebted to Professor Papola for having read an earlier draft and for many suggestions which have helped to produce an improved version of the paper. Gratitude is also due to Puja Mehta and Dhanunjai Kumar for editorial and other assistance. The responsibility for any remaining errors of fact and interpretation, however, would be solely my own. E-mail: surajit@isid.org.in

industrial sector played a prominent role in driving the process of growth and structural change in output. This was, however, a more pronounced feature of the phase from independence to the mid-1960s, after which the tendency lost steam. The period of accelerated growth after 1980 was accompanied by the replacement of industry by services as the sector playing the most prominent role. Initially, however, it was the expansion of the public sector which chiefly underlay this increased importance of services in the process of growth and structural change. From the mid-1990s the services oriented trajectory was reinforced with the private organized sector decisively replacing the public sector as the driving force behind it.

## **1. Growth, Structural Change and the Indian Economy: A Brief Introductory Overview**

That major structural shifts in output and employment always accompany a sustained and rapid growth of per capita output of a country has been an established truism since the original studies of economic growth by Fisher, Clark and Kuznets<sup>1</sup>. Such structural shifts have been seen as mechanisms influencing the pace of growth as well as being the result of growth. Either of the two tripartite divisions of the economy closely resembling each other—the primary-secondary-tertiary or agriculture-industry-services divisions—have been used to describe the typical pattern of structural change associated with what Kuznets called modern economic growth<sup>2</sup>. This typical pattern involves initially a shift from an agricultural to an industrial economy through industrialization—an increase in the share of the industrial/secondary sector in output and employment combined with a declining importance of the agriculture/primary sector. The subsequent post-industrialization or de-industrialization stage is one whose chief feature is the rising importance of the services/tertiary sector, even at the expense of industry, or the transition to a service economy<sup>3</sup>.

A variety of factors have been highlighted in attempts to explain the observed association between growth and structural shifts in output and employment<sup>4</sup>. On the demand side, the operation of Engel's Law leading to shifts in the pattern of demand as incomes rise has been one such factor. On the supply side, inherently differential productivities and productivity growth of the three sectors has been advanced as an important source of this association. The growing demand of firms for services and

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<sup>1</sup> Fisher (1935,1952), Clark (1940/1951, 1949), Kuznets (1972)

<sup>2</sup> Soubbotina and Sheram (2000)

<sup>3</sup> Riddle (1986), however, emphasized the continuous importance of services.

<sup>4</sup> Apart from those of the pioneers, some of the other major works are Kaldor (1967), Baumol (1967), Fuchs (1968), and Rowthorn and Ramaswami (1997). Schettkat and Yocarini (2003) provide a review of the literature on the shift towards services.



increasing outsourcing of these have also been highlighted as important in explaining at least the eventual shift towards services. While these explanatory factors do indicate why structural changes in output and employment are an inevitable part of economic growth, it remains unclear why their patterns cannot be different for countries making their transitions to rapid and sustained growth at very different points of time and under very different technological and trade contexts. However, leaving aside the Indian case, the historical experience of not only developed countries but also developing economies appears to support the case for there being a *universal* pattern<sup>5</sup>.

The only significant difference in the situation of late-industrializing developing countries in comparison to developed countries that is acknowledged relates to the employment potential of industrialization<sup>6</sup>. For a late-starting country with access to high-productivity capital-intensive technology from developed countries, this potential is considerably reduced if output expansion is based primarily on the domestic market. The implication of this is that in developing countries the process of shift in employment away from agriculture becomes slower, while the de-industrialization and tertiarization of employment can begin at lower levels of income than it had in the case of developed countries.

Generally the literature on India's growth history has been preoccupied with the issue of turning points in growth rates rather than with the structural changes accompanying them. A parallel discourse, however, exists on the phenomenon of services rather than industry accounting for an extraordinarily large share of the expansion of non-agricultural output in India. As regards growth rates, two major turning points have been referred to<sup>7</sup>. While it has been debated as to which was the more important and significant one, the status of both as key turning points has not been questioned. The first is associated with independence and the transition from the stagnation of the colonial era to the 'Hindu rate of growth'. It is only with this that anything that could be described as modern economic growth began in India. The second turning point is 1980, after which the Indian economy appears to have graduated to a higher trend growth of 5.5–6% per annum. One could also say that the early years of the current century saw a third turning point with GDP growth rates accelerating further. However, in the background of the

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<sup>5</sup> Chenery and Syrquin (1975), UNCTAD (2003), United Nations (2006)

<sup>6</sup> UNCTAD (2003)

<sup>7</sup> The second of these has been focused on by many and finds particular reference in the context of the debate on the significance of the 1990s liberalization in the growth turnaround [Acharya (2007), DeLong (2003), Virmani (2004 a and b), Sinha and Tejani (2004), Rodrik and Subramanian (2005), Srinivasan (2005), Panagariya(2004), Kohli (2006 a and b), Kaur (2007), and Wallack (2003)]. Others have, however, stressed on the first being the more important turning point [Hatekar and Dongre (2005) and Nayyar (2006)].

current slow-down which has set in within a few years of the appearance of 8–9 per cent growth rates, there are questions about whether 2003–04 initiated a long-term shift in the same way as did the previous two turning points. In this paper we focus on these two earlier ones, suggesting however that they were fundamentally different in nature from each other because of the pattern of structural change in output that accompanied the rise in the growth rate. In other words, independence and 1980 were turning points in more senses than one.

When the large role of services in Indian growth was first noted, it tended to be described as “disproportionality” or an “excess growth” of services<sup>8</sup>. Currently, many are prone to term it as India’s “services revolution”<sup>9</sup>. The phenomenon has also provoked a lot of debate regarding the factors explaining it, its desirability and long-term sustainability<sup>10</sup>. It has also led to the raising of the question—Is India pioneering a new pattern where services can play the same role as industry had for other countries in the past?<sup>11</sup> Measurement issues have also come under the scanner—How much of the growth of services is real and how much purely statistical?<sup>12</sup> Whatever be one’s preferred viewpoint on these issues, however, there is little doubt that the exceptional growth of services makes the Indian case of structural change an odd one, an exception to the general rule. Two widely noted features have marked out this oddness. The first is the premature nature of the transition to a services dominated economy, at an exceptionally low level of per capita income and without achieving full-fledged industrialization. The second is that the large share of services in output has not been matched by a corresponding one in employment. These have of course distinguished the Indian case from the experience of the developed countries, where *both* the attainment of high levels of industrialization and the shift of *employment* towards services preceded the decisive shift towards tertiarization of output<sup>13</sup>. It has also, however, been shown that the prominence of services in India distinguishes it from many other Asian developing countries experiencing growth over the same period<sup>14</sup>. One may add to this that the increasing importance of services in India is also not comparable with a similar trend in Latin America since the 1980s. One reason for this is because of the significantly higher levels of per capita income in Latin America. But more importantly, de-industrialization and the shift towards services in Latin America was associated with a significant slowing

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<sup>8</sup> Mitra (1988), Bhattacharya and Mitra (1990)

<sup>9</sup> Gordon and Gupta (2004), World Bank (2004)

<sup>10</sup> Papola (2006), Banga (2005), Joshi (2004)

<sup>11</sup> Dasgupta and Singh (2005)

<sup>12</sup> Nagaraj (2009), Shetty (2007)

<sup>13</sup> It is only after 1970s and slowing down of growth that services share in output has increased.

<sup>14</sup> Papola (2006)

down of growth<sup>15</sup>. This is certainly not true for India. This paper shall in fact highlight that the Indian story is quite the opposite—the shift coincides with the transition around 1980 to a higher growth path.

This coincidence has perhaps not received adequate attention either in the discussions on Indian growth or those on the phenomenal growth of services, though a relationship between continuous acceleration in services and aggregate growths since independence has been referred to<sup>16</sup>. In fact, one finds that there is little clear cut discussion on the issue of dating the beginnings of the shift towards services in India. Different authors have located it at widely different points of time. For example, Mitra thought it began in the mid-1970s, while Rakshit and some others see it as mainly a phenomenon emerging from the mid-1990s<sup>17</sup>. This paper shall, however, make the case that the original shift was around 1980 and both this and the accompanying acceleration in overall growth rate separates the period after it from that before. However, there are discontinuities within the two broad phases of the post-independence period on either side of 1980. It is in that context that the turning point in the mid-1990s, as also another one in the mid-1960s, is important. Indeed, both acquire a new significance not normally attached to them.

The mid-1960s is usually seen as marking the end of the first phase of rapid industrial growth after independence, which was followed by the decade of stagnation from which recovery happened in the late 1970s to the early 1980s. This paper will, however, suggest that what ended in the mid-1960s was also a chapter of India's growth and structural change that has never been repeated since, and from which a decisive break took place after 1980. The beginning of the 1990s, it is now widely accepted, represented a significant break in Indian economic policy but this had no discernible impact on its growth trend. This paper does not contest that view. It will, however, argue that following liberalization, most sharply from the mid-1990s, the pattern of growth in India did shift in important ways that actually decisively reinforced the trajectory that had been prevalent since 1980.

## 2. Data Sources

The analysis presented in this paper is based entirely on data drawn from the CSO's National Accounts Statistics (NAS), 1999–00 base year series. NAS 2008 and 2009, and the NAS 1999–00 base year back series, between themselves cover the entire period, 1950–51

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<sup>15</sup> UNCTAD (2003)

<sup>16</sup> Mohan (2008)

<sup>17</sup> Mitra (1988), Rakshit (2007)

to 2007–08, and it is from these that data at both at current prices as well as constant 1999-00 prices are taken for this paper.

### **3. The Issue of Industrial Classification**

As mentioned earlier, the analysis of structural change in output over time is normally based on a division of the economy into agriculture-industry-services or primary-secondary-tertiary sectors. This paper uses the former. The demarcation of the industrial sector from the services sectors has, however, never been an easy matter. Thus, Simon Kuznets included transport and communication in industry while Colin Clark put even construction in the category of services. Riddle included even utilities in services. The general practice that has come to be established, however, is to include construction and utilities in industry, along with mining and manufacturing, and all other non-agricultural activities including transport and communication in services.

The choice of classification scheme is, of course, something extremely important because it can affect the conclusions one draws about the patterns of structural change accompanying growth. It could also perhaps be argued that meaningful classification schemes may need to be contextualized in space and time as the nature of activities making up each broad sector and their characteristics, the relative importance of different activities making up any sector, and the relationships between the growths of different activities are all variable. Software services, for instance, may be an important component of services today, but nothing of equivalent nature existed earlier. At one time non-tradability was almost a defining characteristic of services, but that is no longer true. The growth of transport and communication in an earlier era meant the expansion of railways and the telegraph. Today the growth of aviation and mobile telephony may be the driver of growth in the same sector. The linkages between industrial growth and the expansion of such services, and maybe even between the former and construction, in the contemporary world are unlikely to be of the same kind as the past relationship between industrialization and railway expansion.

This paper, however, will not enter into a minefield by trying to address complications of the kind indicated by the above. Instead, it will generally follow the conventional classification of activities into the three broad sectors. However, as shall subsequently become clear, there are some practical problems associated with including construction in industry. To circumvent these, an approach of using two parallel classification schemes is adopted. Thus, the economy is divided into agriculture-industry 1-services 1 in one classification and agriculture-industry 2-services 2 in the other.

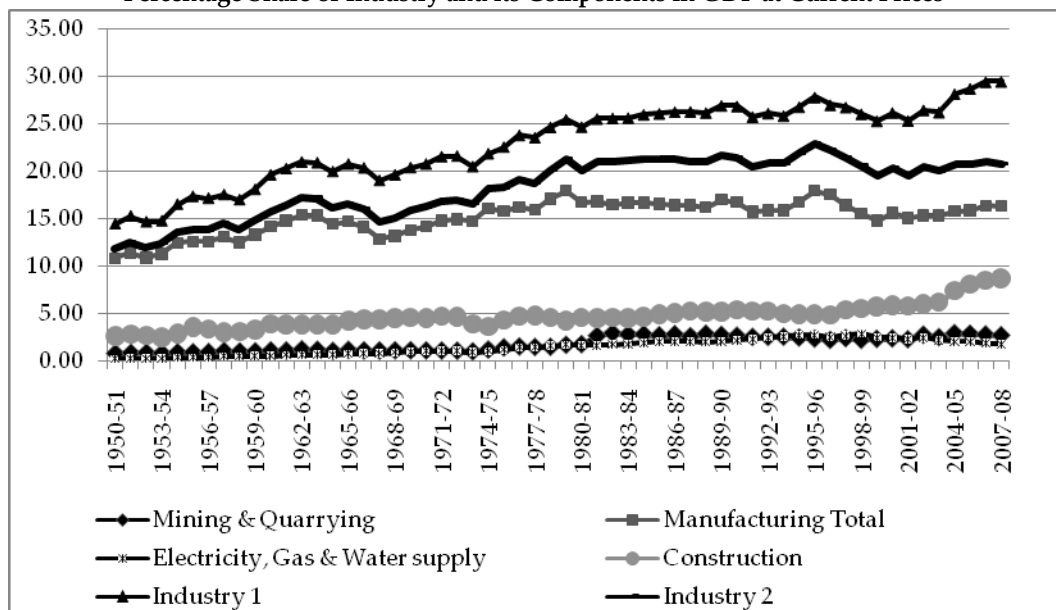
1. **Agriculture** – Agriculture, Forestry and Fishing (1)
2. **Industry 1** – Mining and Quarrying (2); Manufacturing (3); Electricity, Gas and Water Supply (4); Construction (5)
3. **Industry 2** – Industry 1 excluding Construction
4. **Services 1** – Trade, Hotels and Restaurants (6); Transport, Storage and Communication (7); Financing, Insurance, Real Estate and Business Services (8); Community, Social and Personal Services (9)
5. **Services 2** – Services 1 and Construction

*Note:* Numbers in Brackets Refer to the Relevant Industry Codes.

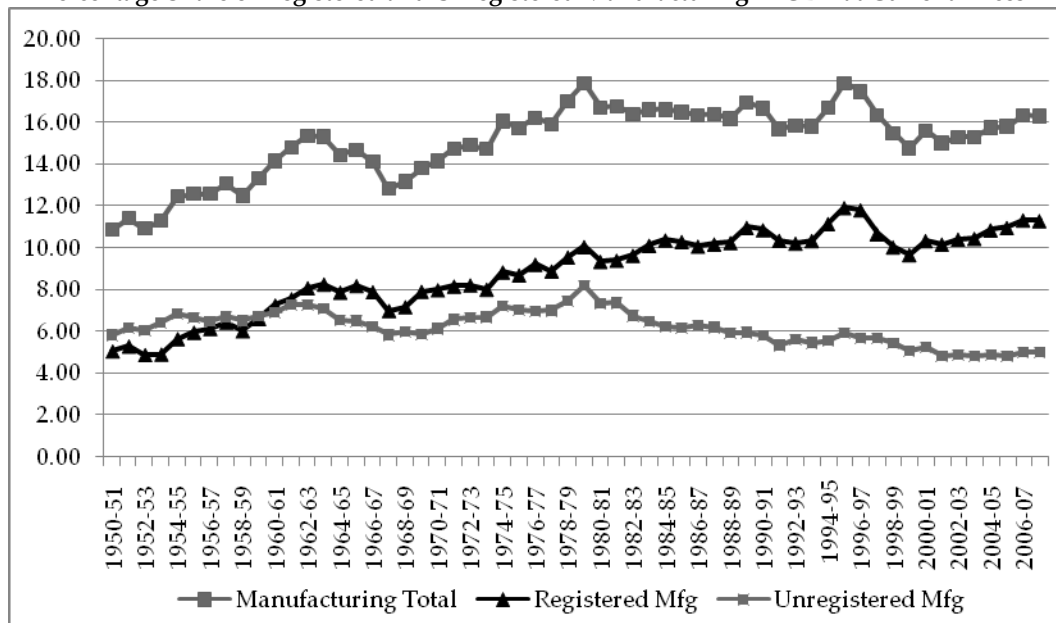
Figure 1 shows the movement in the share of the industrial sector in GDP at current prices over the entire reference period. A noticeable difference can be seen to emerge between the trends for Industry 1 and Industry 2 towards the very end of the period—in the phase of very high growth after 2002–03. Thus, while Industry 1's share in GDP attained its highest level in 2007–08, Industry 2 crossed its peak level much further back, in 1995–96. This difference is obviously attributable to the fact that construction is included in the first, but not in the second. However, what is noteworthy is that it is only the construction sector whose share in GDP attained its highest value in 2007–08. For all other components of the industrial sector these peak values were earlier. The same is also true of the registered and unregistered segments of the manufacturing sector seen separately (Figure 2). The pattern of movement of the share of Industry 2 is thus more representative of the pattern exhibited by the entire industrial sector barring construction, as also it's most important component, namely manufacturing.

Table 1 brings out the above clearly by showing that except for construction, the peak values of the share in GDP, all components of the industrial sector were attained within the period stretching from 1979–80 to 1995–96. It, in addition, demonstrates that a substantial part of the change in the share of the industrial sector, and its components other than construction, in GDP occurred between 1950–51 and 1979–80. The picture subsequently is of relative stability. This is in contrast to the pattern exhibited by the share of services in GDP, which increases to a greater extent after 1979–80 than before, like in the case of construction. In fact, it is virtually entirely services and construction that account for the increase in the share of non-agriculture after 1979–80. In contrast, in the earlier period industry had accounted for half or more of this increase.

**Figure 1**  
**Percentage Share of Industry and its Components in GDP at Current Prices**



**Figure 2**  
**Percentage Share of Registered and Unregistered Manufacturing in GDP at Current Prices**



**Table 1**  
**Percentage Shares in GDP at Current Prices**

<i>Item</i>	<i>Peak Value of Share in Aggregate GDP</i>		<i>Share in Aggregate GDP in:</i>			<i>Change in Percentage Share</i>	
	<i>Year</i>	<i>Percentage Share</i>	<i>195–51</i>	<i>1979–80</i>	<i>2007–08</i>	<i>1950–51 to 1979–80</i>	<i>1979–80 to 2007–08</i>
Mining & Quarrying	1982–83	2.95	0.77	1.68	2.72	0.91	1.03
	2004–05	2.95					
Manufacturing Total	1979–80	17.89	10.87	17.89	16.32	7.03	-1.57
	1995–96	17.88					
<i>Registered Mfg</i>	1995–96	11.93	5.08	10.07	11.31	4.98	1.24
<i>Unregistered Mfg</i>	1979–80	8.2	5.84	8.20	5.01	2.36	-3.19
Electricity, Gas & Water supply	1998–99	2.84	0.24	1.69	1.76	1.46	0.07
Construction	2007–08	8.71	2.56	4.20	8.71	1.64	4.51
<b>Industry 1</b>	<b>2007–08</b>	<b>29.51</b>	<b>14.44</b>	<b>25.47</b>	<b>29.51</b>	<b>11.03</b>	<b>4.04</b>
<b>Industry 2</b>	<b>1995–96</b>	<b>22.93</b>	<b>11.87</b>	<b>21.27</b>	<b>20.80</b>	<b>9.39</b>	<b>-0.47</b>
<b>Services 1</b>			<b>32.73</b>	<b>40.85</b>	<b>52.38</b>	<b>8.12</b>	<b>11.53</b>
<b>Services 2</b>			<b>35.29</b>	<b>45.05</b>	<b>61.09</b>	<b>9.76</b>	<b>16.04</b>
<b>Non-Agriculture</b>			<b>47.17</b>	<b>66.32</b>	<b>81.89</b>	<b>19.15</b>	<b>15.57</b>

The picture presented above does not change significantly if constant price figures are used instead of current price ones. Figures 3 and 4 and Table 2 based on data at 1999–00 prices are near mirror images of Figures 1 and 2 and Table 1 respectively. The only notable differences are the following. Firstly, the difference between Industry 1 and Industry 2 is less sharp in this case, with the share in GDP of even Industry 1 also peaking in 1995–96. Secondly, at constant prices the difference between the movements of the shares in GDP of construction and other components of Industry 1 in the pre- and post-1980 periods also disappears. What these reflect is that the sharp rise of the output share of construction (at current prices) in recent times reflected both a rapid real growth as well as a relatively faster increase of its prices. Moreover, because it was preceded by a phase where its real share in the economy was declining, the recent rapid real growth of the construction sector has not had a dramatic impact on that share when seen over a longer time period. The important point, however, is that all of these only reinforce the fact that the process of structural change after 1979–80 has lacked the *industrial* character that was visible earlier.

Figure 3  
Percentage Share of Industry and its Components in GDP at 1999–00 Prices

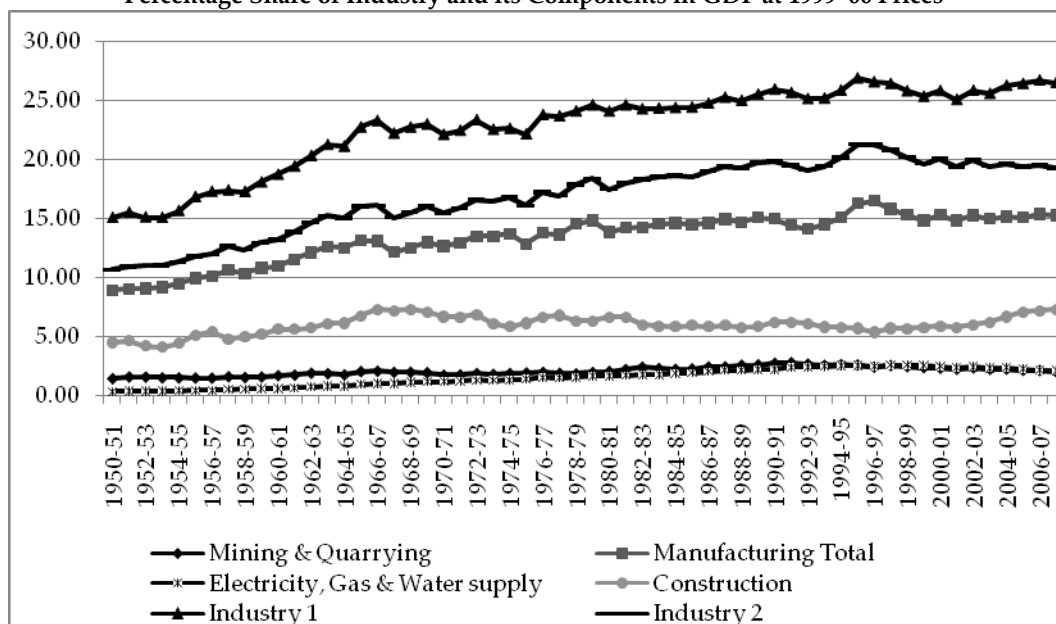
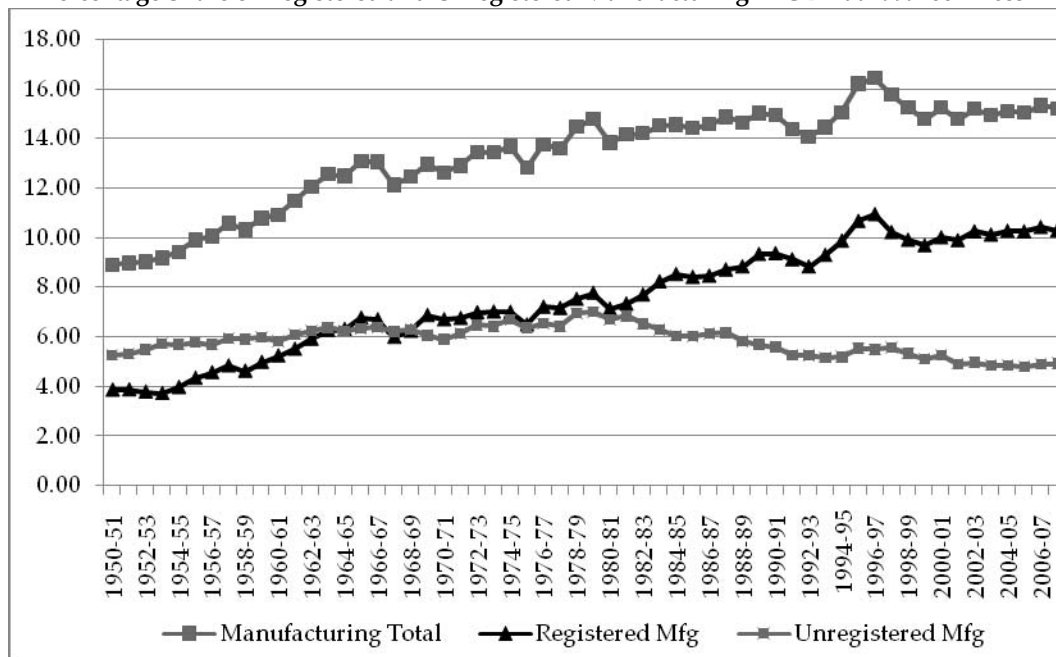


Figure 4  
Percentage Share of Registered and Unregistered Manufacturing in GDP at 1999–00 Prices



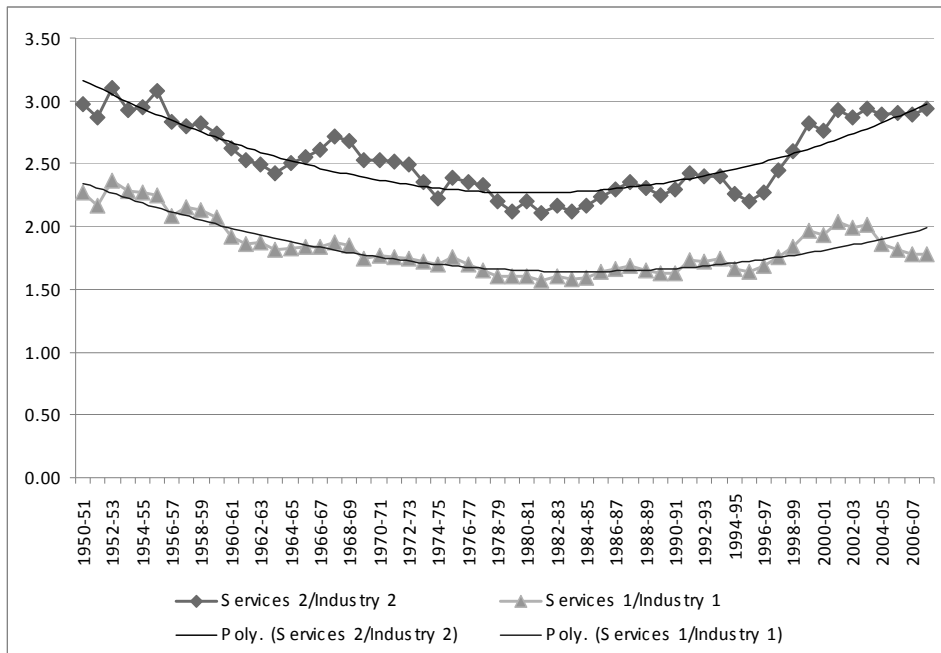


**Table 2**  
**Percentage Shares in GDP at 1999–00 Prices**

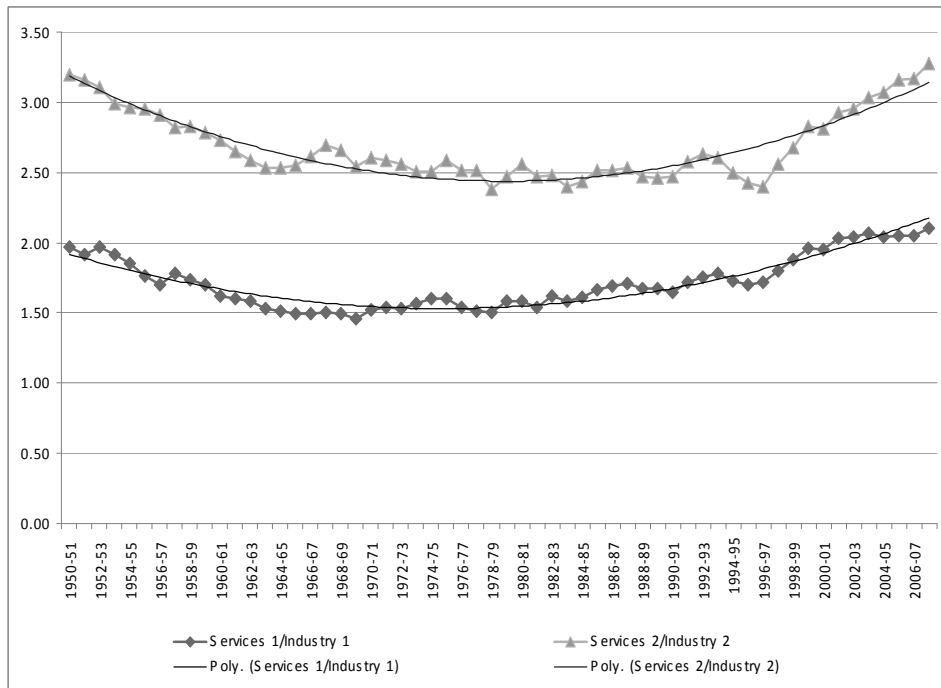
<i>Item</i>	<i>Peak Value of Share in Aggregate GDP</i>		<i>Share in Aggregate GDP in:</i>			<i>Change in Percentage Share</i>	
	<i>Year</i>	<i>Percentage Share</i>	<i>1950–51</i>	<i>1979–80</i>	<i>2007–08</i>	<i>1950–51 to 1979–80</i>	<i>1979–80 to 2007–08</i>
Mining & Quarrying	1991–92	2.73	1.41	1.92	1.98	0.51	0.06
Manufacturing Total	1996–97	16.44	8.90	14.79	15.22	5.89	0.43
<i>Registered Mfg</i>	1996–97	10.94	3.85	7.77	10.29	3.91	2.52
<i>Unregistered Mfg</i>	1979–80	6.99	5.25	6.99	4.93	1.74	-2.06
Electricity, Gas & Water supply	1997–98	2.51	0.31	1.63	2.04	1.33	0.40
	1998–99	2.51					
Construction	1968–69	7.21	4.42	6.25	7.23	1.83	0.99
	2007–08	7.23					
<b>Industry 1</b>	<b>1995–96</b>	<b>26.87</b>	<b>15.03</b>	<b>24.59</b>	<b>26.47</b>	<b>9.55</b>	<b>1.88</b>
<b>Industry 2</b>	<b>1995–96</b>	<b>21.24</b>	<b>10.62</b>	<b>18.34</b>	<b>19.24</b>	<b>7.73</b>	<b>0.89</b>
<b>Services 1</b>			<b>29.55</b>	<b>39.05</b>	<b>55.73</b>	<b>9.50</b>	<b>16.68</b>
<b>Services 2</b>			<b>33.96</b>	<b>45.29</b>	<b>62.96</b>	<b>11.33</b>	<b>17.67</b>
<b>Non-Agriculture</b>			<b>44.58</b>	<b>63.64</b>	<b>82.20</b>	<b>19.05</b>	<b>18.56</b>

The focus on 1979–80 or 1980 as the dividing line is not arbitrary. Quite apart from the fact that it very neatly divides our entire reference period into two sub-periods of virtually identical time spans is the following. The movement of ratio of services GDP to industrial GDP at both current and constant prices exhibits a U-shaped pattern (Figures 5 and 6) with the base of the U being around 1980.

**Figure 5**  
**Ratio of Services GDP to Industrial GDP at Current Prices**



**Figure 6**  
**Ratio of Services GDP to Industrial GDP at 1999–00 Prices**



In other words, even as growth accelerated after 1980, accompanying it was a clear reversal in the direction of movement of the composition of the non-agricultural sector. Table 3 sums this up by showing that like in the pattern of structural change, the growth process of the economy as a whole as well as of its non-agricultural component were much less industrial after 1980 than before. This is despite the fact that at independence the share of the industrial and manufacturing sectors in the economy was much smaller than in 1980. Services, which accounted for a significantly larger share of output in 1950–51, did not, however, contribute as much to growth before 1980 as it has done after that.

**Table 3**  
**Contribution to Point-to-Point Increase in GDP**

<i>Item</i>	<i>Percentage Contribution to Total GDP Growth</i>		<i>Percentage Contribution to Non-Agricultural Growth</i>	
	<i>1950–51 to 1979–80</i>	<i>1979–80 to 2007–08</i>	<i>1950–51 to 1979–80</i>	<i>1979–80 to 2007–08</i>
Mining & Quarrying	2.23	1.99	2.97	2.30
Manufacturing Total	18.33	15.32	24.41	17.69
<i>Registered Mfg</i>	10.12	10.88	13.48	12.57
<i>Unregistered Mfg</i>	8.03	4.44	10.69	5.13
Electricity, Gas & Water supply	2.43	2.13	3.23	2.46
Construction	7.34	7.46	9.78	8.62
<b>Industry 1</b>	<b>30.33</b>	<b>26.91</b>	<b>40.39</b>	<b>31.08</b>
<b>Industry 2</b>	<b>22.98</b>	<b>19.45</b>	<b>30.61</b>	<b>22.46</b>
<b>Services 1</b>	<b>44.76</b>	<b>59.68</b>	<b>59.61</b>	<b>68.92</b>
<b>Services 2</b>	<b>52.10</b>	<b>67.14</b>	<b>69.39</b>	<b>77.54</b>
<b>Non-Agriculture</b>	<b>75.08</b>	<b>86.59</b>	<b>100.00</b>	<b>100.00</b>

#### 4. The Mid-1960s Collapse: The Beginning of the End of Industrialization Centred Growth and Structural Change?

Since the above analysis has indicated that the industrial sector played a more prominent role in the process of growth and structural change before 1980, it is only natural that note is taken of the fact that the pace of industrial growth was highly uneven within that period. Indeed, one of the remarkable features of that period is that it includes both the decade of industrial stagnation as well as the decade and a half with the highest rate of industrial growth achieved after independence. The latter is shown by Figure 7, which plots the average growth rate of *all* possible 15-year periods whose starting and ending years fell between 1950–51 and 2007–08. The first of these 15-year periods stretches from 1950–51 to 1964–65, the second from 1951–52 to 1965–66, the third from 1952–53 to 1966–

67 and so on till the last one from 1993–94 to 2007–08. The figure shows that the high values of the initial few 15-year periods gave way to a sharp decline thereafter as a result of the industrial slow-down from the mid-1960s onwards. The revival of industrial growth from the late 1970s or so then gradually pushed up the previous 15-year growth rates. Another half-decade slow-down from the second half of the 1990s, however, resulted in another dip before the previous 15-year growth rate could reach the initial high levels. Further, even though this slow-down was followed by a period of extremely rapid industrial growth from 2003–04 till 2007–08, it still did not carry the previous 15-year growth rate till 2007–08 past those levels. Thus, one may say that the rates of industrial growth achieved before the mid-1960s collapse, roughly covering the period of the first three plans, were not replicated in any subsequent 15-year period. This conclusion emerges even more sharply if we consider Industry 2 rather than Industry 1.

**Figure 7**  
**Average Growth Rate over 15-Year Period in Year Ending 1964–65 to 2007–08**  
**(GDP at 1999–00 prices) – 1**

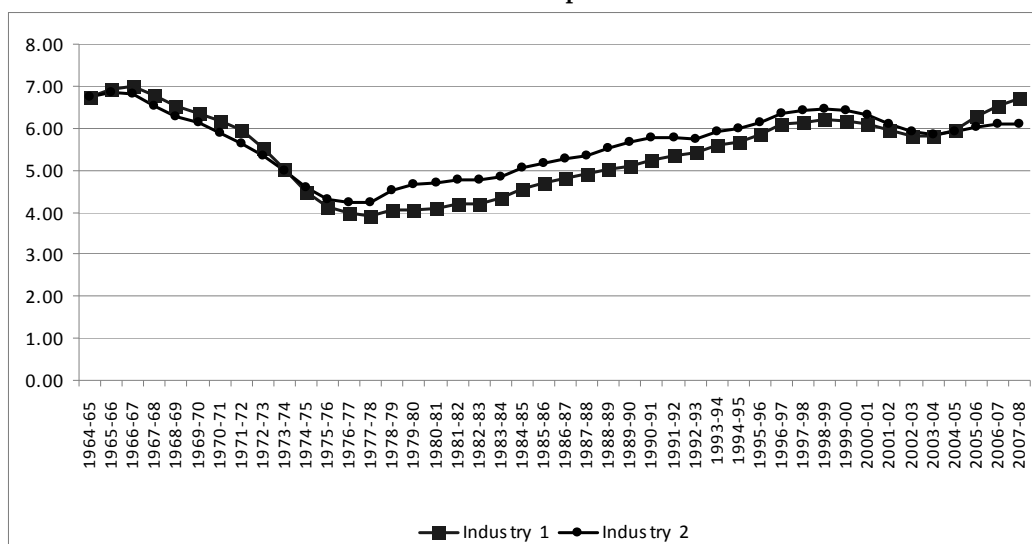
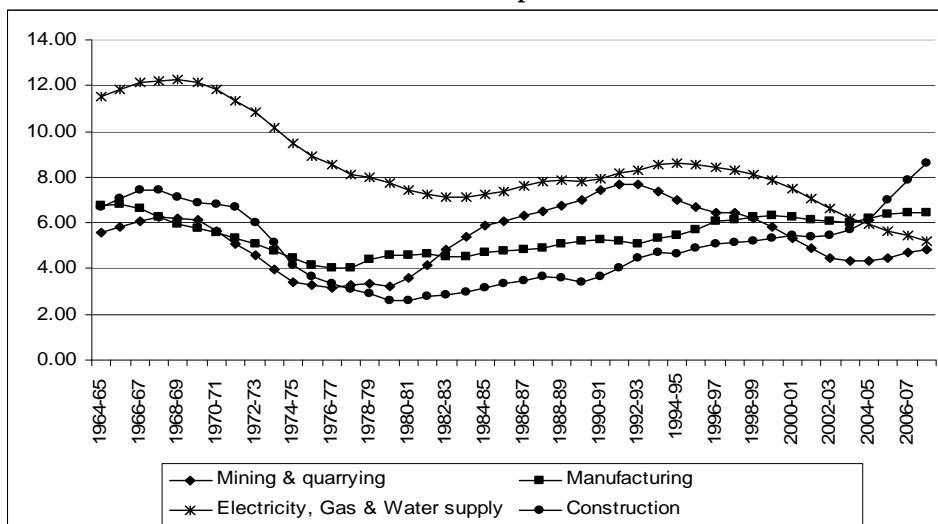


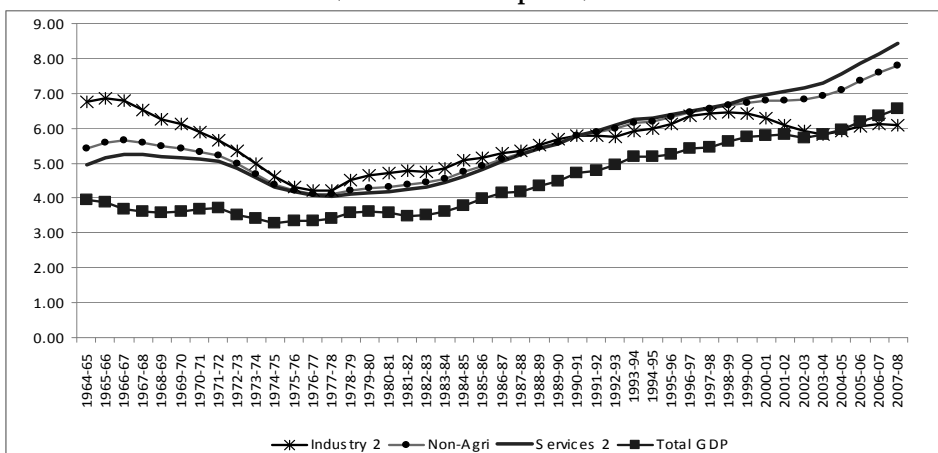
Figure 8 further shows that behind the above-mentioned pattern of 15-year industrial growth rates is the failure of the manufacturing and the electricity sectors to attain ever again the growth rates of the Nehruvian period. Moreover, the increase in the share of the industrial sector in GDP was more significant up to the mid-1960s than after.

**Figure 8**  
**Average Growth Rate over 15-Year Period in Year Ending 1964–65 to 2007–08**  
**(GDP at 1999–00 prices) – 2**



The pattern of the post-independence 15-year growth rates of services is similar to that of the industrial sector to the extent that it too exhibited a dip after the mid-1960s before moving upwards after 1980. The difference is that this upward movement in the case of services was sharper, and the steady rise in the 15-year growth rates in every successive period has carried it to a level far higher than in the initial periods. Indeed, if the patterns of the industrial and services sectors are juxtaposed to each other (Figure 9), then the following emerges.

**Figure 9**  
**Average Growth Rate over 15-Year Period in Year Ending 1964–65 to 2007–08**  
**(GDP at 1999–00 prices) – 3**

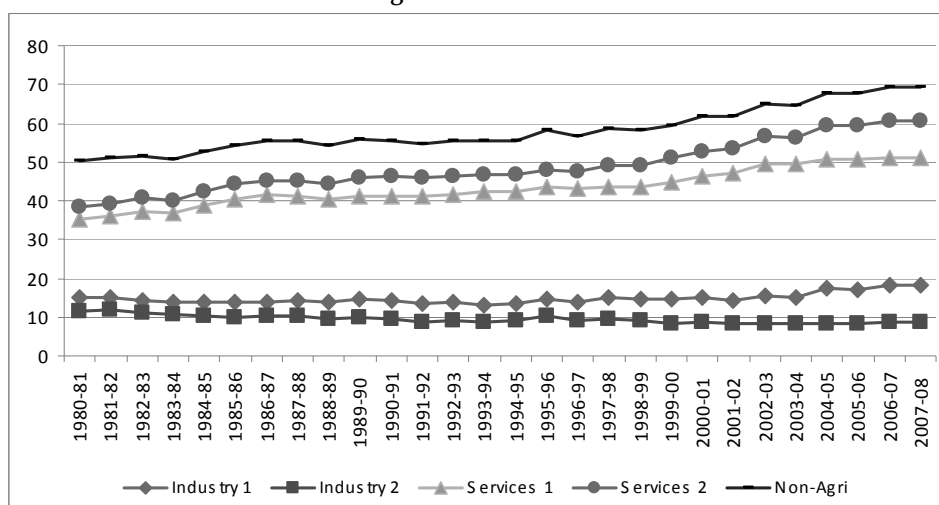


Till the mid-1960s, previous 15-year industrial growth rates were much higher than that of services. The gap started closing thereafter as the industrial growth rate fell more sharply and more or less disappeared by the mid- to late 1970s. Both then moved in tandem till the mid-1990s after which preceding 15-year period industrial growth rates tapered off and were left far behind by the corresponding services growth rates. In other words, the tilt towards a more service dominated growth trajectory after 1980 was further reinforced from the mid-1990s. This only serves to emphasize that the period up to the mid-1960s was the only proper phase of an *industry* driven process of growth and structural change which took the Indian economy out of the stagnation characteristic of the colonial era. The beginning of the end of this process or its slow unwinding, and not a mere slowing down of industrial growth, was thus heralded by the crisis of the mid-1960s.

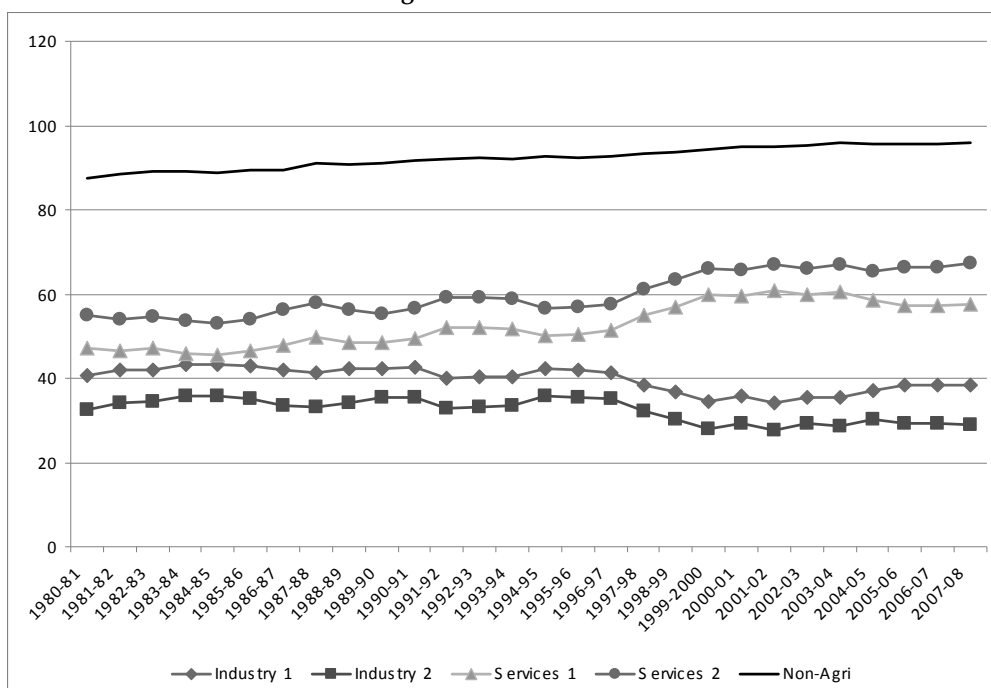
## 5. Services Dominated Growth: The Transition from Public to Private Sector Led

The shift towards a more services dominated pattern of growth and structural change after 1980 did not initially reflect the emergence of a trend of an increasing importance of services relative to industry in every institutional segment of the Indian economy. Only in the case of the unorganized sector can one observe a more or less consistent but slow trend of relative deindustrialization of its output (NDP), and an increasing share of services, since 1980 (Figure 10). Figures 11 to 13 reveal, however, that no similar trend was displayed for a decade and a half after 1980 by either the organized sector as a whole or its public and private components individually. The decisive shift of the output composition towards services seems to have occurred in both of them only in the early to mid-1990s.

Figure 10  
Distribution of Unorganized Sector NDP at Current Prices

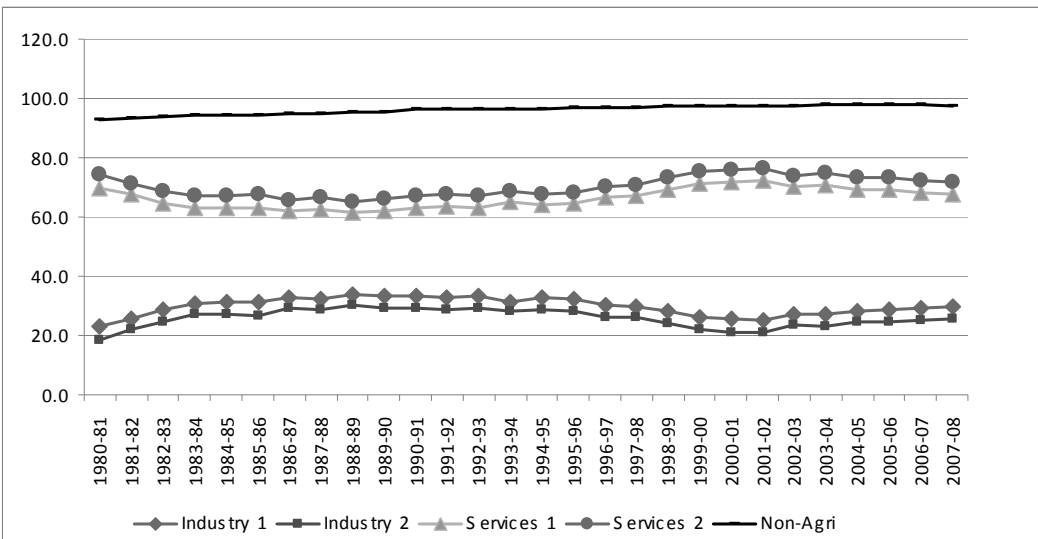


**Figure 11**  
**Distribution of Organized Sector NDP at Current Prices**

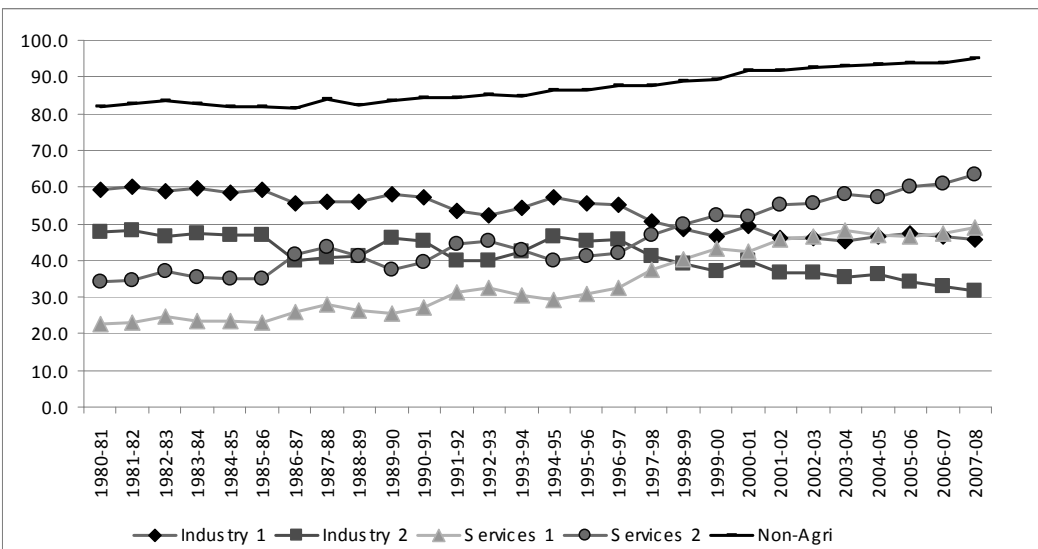


As far as the public sector is concerned, the trend in the 1980s, if anything, was in the opposite direction with the share of industry increasing. A slow rise of the share of services in the private organized NDP in the 1980s, more however at the expense of its agricultural rather than industrial segment, is more perceptible. However, while services accounted for an overwhelming share of public sector NDP both before and after the 1980s, in private organized NDP a dramatic reversal took place in the shares of services and industry in the 1990s. Till the mid-1990s, the industrial sector accounted for a significantly greater share of private organized NDP than did services. But sharply opposite movements in these shares thereafter decisively reversed the position in just a few years. Industry 2's share in private organized NDP, which was nearly 48% in 1980–81 and still over 45% in the mid-1990s, fell to just above 31% by 2007–08. In contrast, Services 2 increased its share from around 40% in the mid-1990s to over 63% by 2007–08.

**Figure 12**  
**Shares in Public Sector NDP**



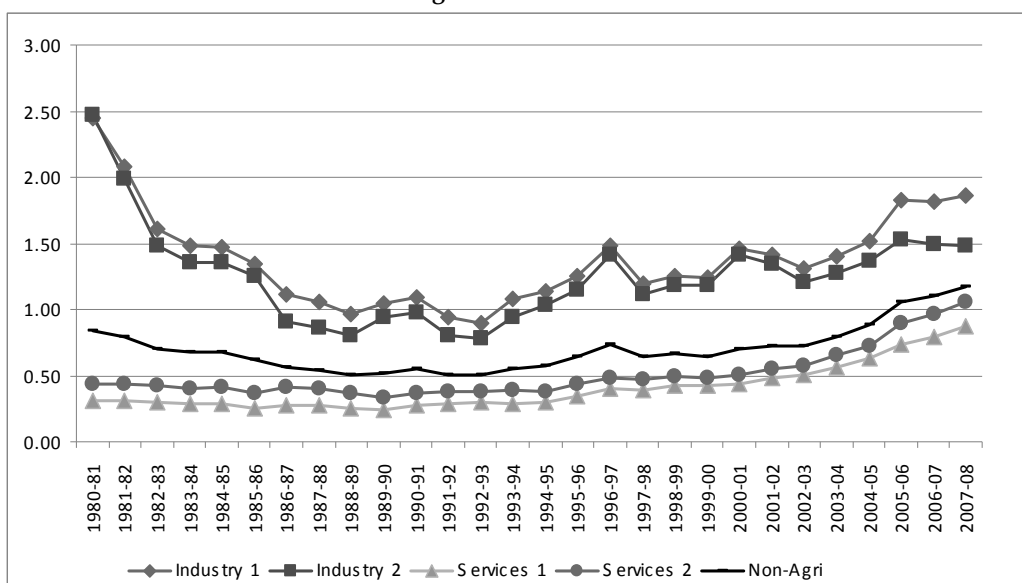
**Figure 13**  
**Shares in Private Organized NDP**



When one is considering the organized sector, one very important difference between the 1980s and the 1990s is with regard to how the relative sizes of its public and private components moved in the two periods. In the 1980s, the private sector share was falling in industry and in services (Figure 14). This trend was, however, decisively reversed after 1991.

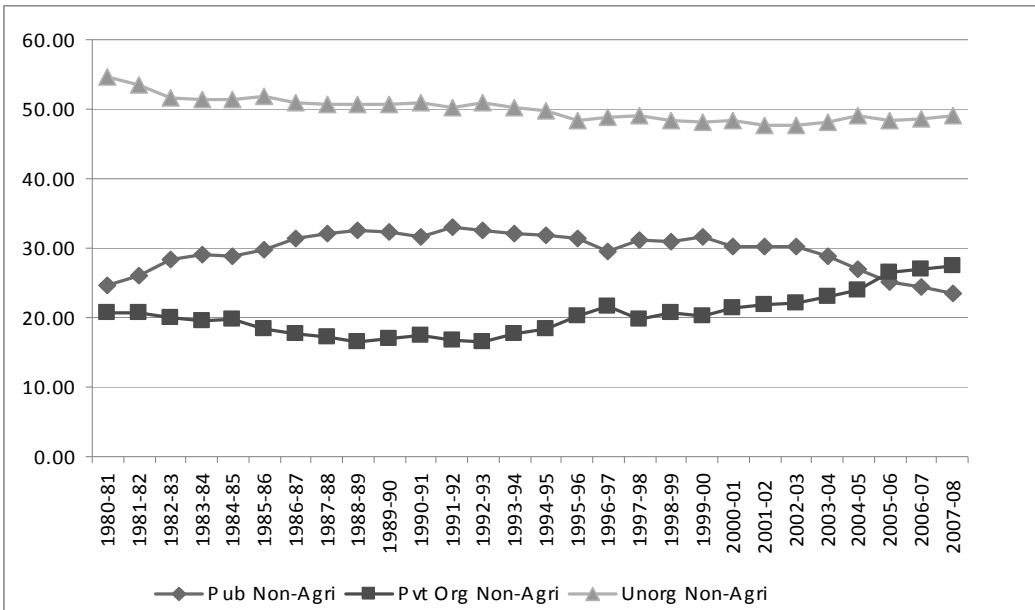


**Figure 14**  
**Ratio of Private Organized NDP to Public Sector NDP**

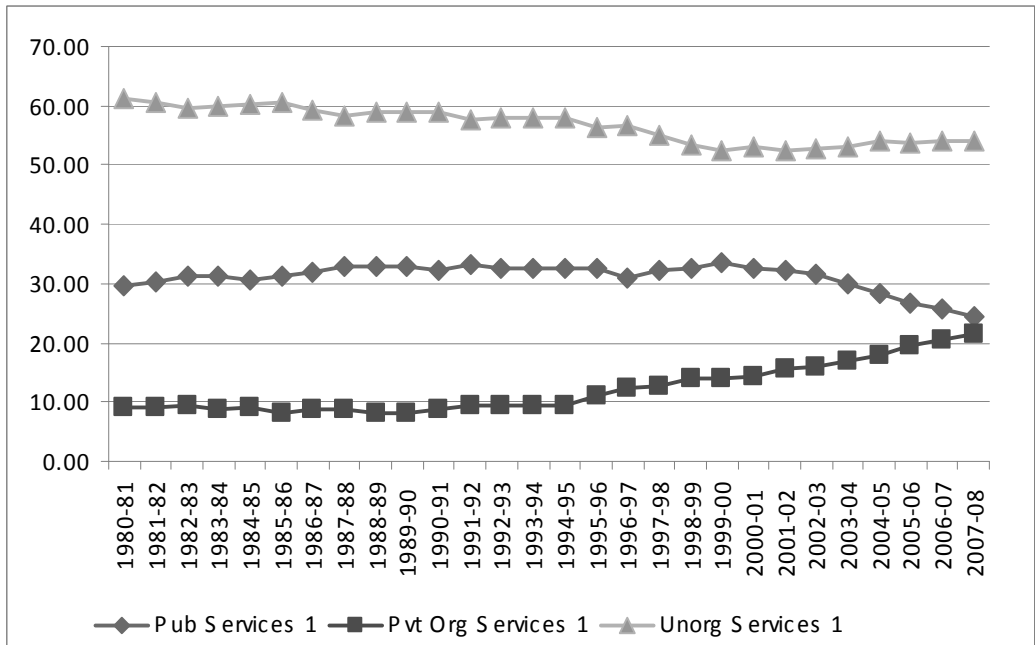


The picture that then emerges is that the shift towards a services dominated pattern of growth and structural change after 1980 went through two different stages. In the 1980s and the early 1990s, the trend of the increasing importance of services relative to industry was primarily attributable to the increasing importance of the public sector in the economy. Though public sector output was not de-industrializing over this period, the share of services in public sector output was consistently significantly greater than in the economy's aggregate output. Consequently as the public sector share in aggregate output increased, it also pushed up the overall share of services. On the other side, whatever little trend there was towards the rising share of services in the non-agricultural output of both the unorganized sector and the private organized sector in the 1980s had little effect on the overall share of services because the share of these sectors in non-agricultural NDP was declining at the same time (Figure 15). The share of services increased after the mid-1990s in the non-agricultural output of all the three institutional segments. Between the early and mid-1990s, however, the private organized sector replaced the public sector as the segment increasing its share in non-agricultural NDP. At the same time the private organized sector made its decisive shift towards services. As shown by Figures 16 and 17, the private organized sector began to rapidly increase its share in services NDP too. Thus, rapid growth of private organized output and the increasing share of services in it were the key factors reinforcing the services dominated growth trajectory after the mid-1990s.

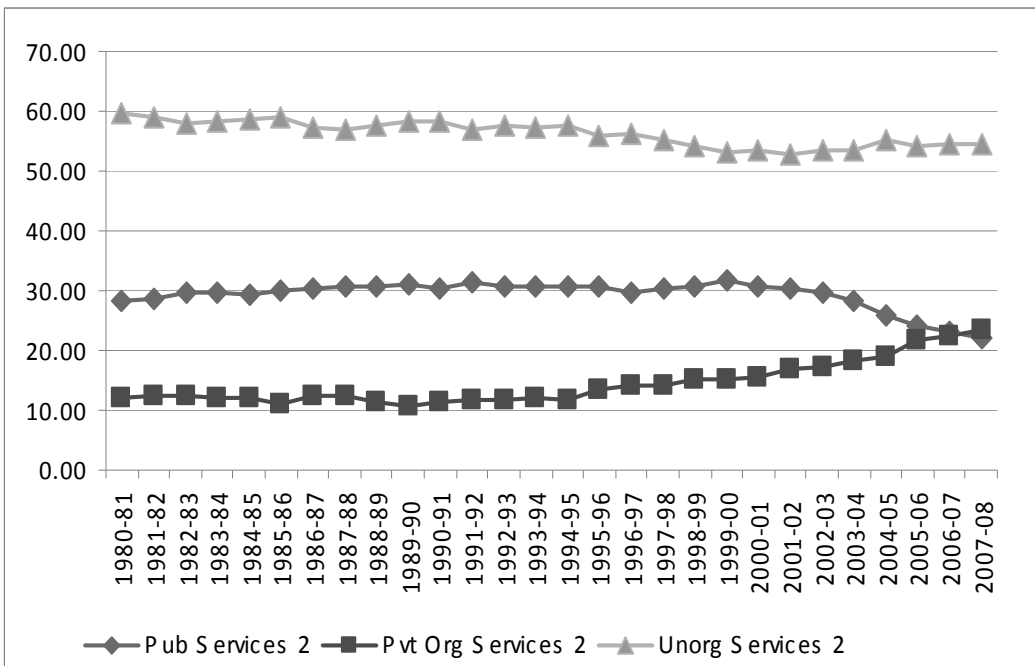
**Figure 15**  
**Shares in Non-Agricultural NDP**



**Figure 16**  
**Shares in Services 1 NDP**

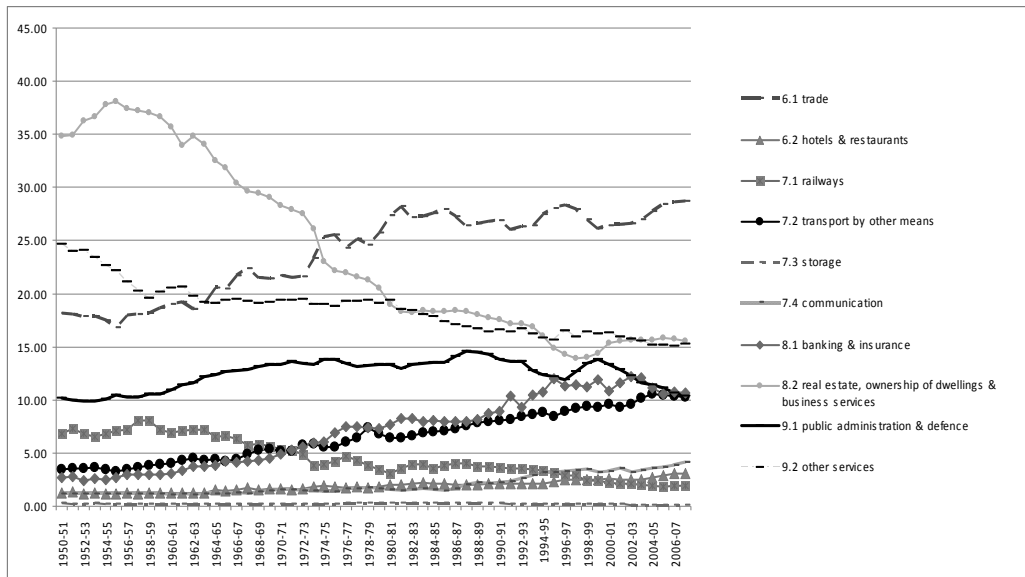


**Figure 17**  
**Shares in Services 2 NDP**

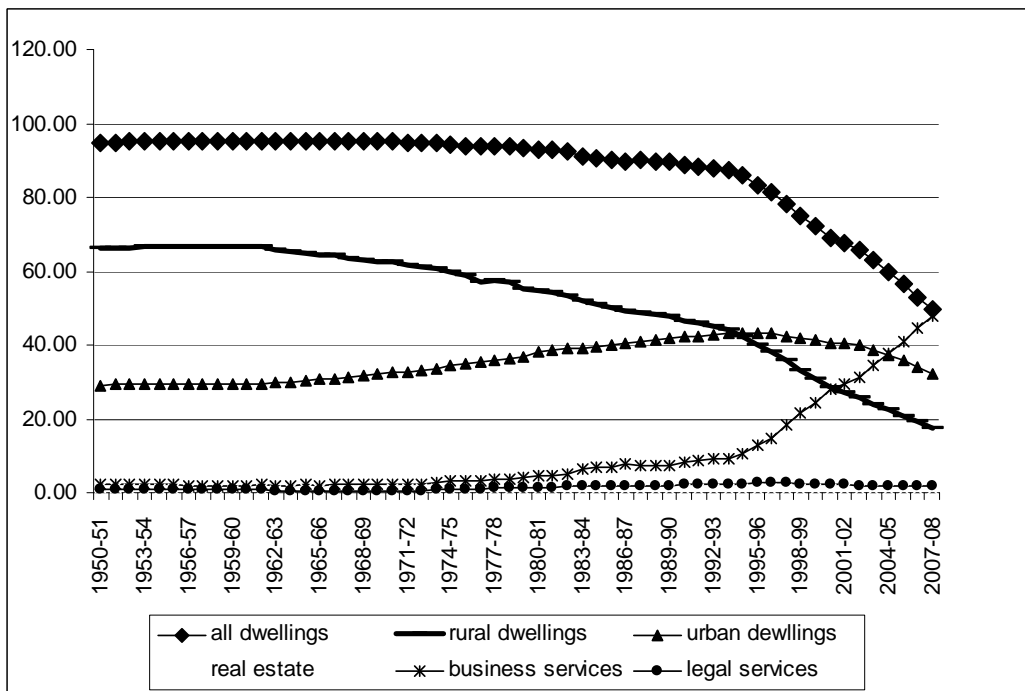


The shift from a public sector led to a private organized sector led growth pattern was also reflected in some changes in the kinds of services driving growth. As Figure 18 shows, the relative shares of most of its components in services output exhibit relatively steady long-term trends. Thus, while the share of railways has been declining for decades, that of transport by other means has increased. Other services like trade, and banking and insurance, have been also steadily increasing in importance. Noticeably, however, the share of public administration and defence, which had been steadily increasing till the end of the 1980s, experienced a reversal thereafter. Real estate, ownership of dwellings and business services exhibits, however, the opposite kind of reversal. This is primarily due to the rapid growth of business services since the early 1990s (Figure 19), which is a known area of rapid private sector growth. Another such area of major private sector activity is communication, which too has grown rapidly in recent times. As shown in Figure 20, beginning from a situation where there was a public sector monopoly in communication at the beginning of the 1990s, the private sector share has now become twice that of the public sector. However, the NAS data suggests that much of this growth of the private sector in communication services is through its unorganized rather than organized segment.

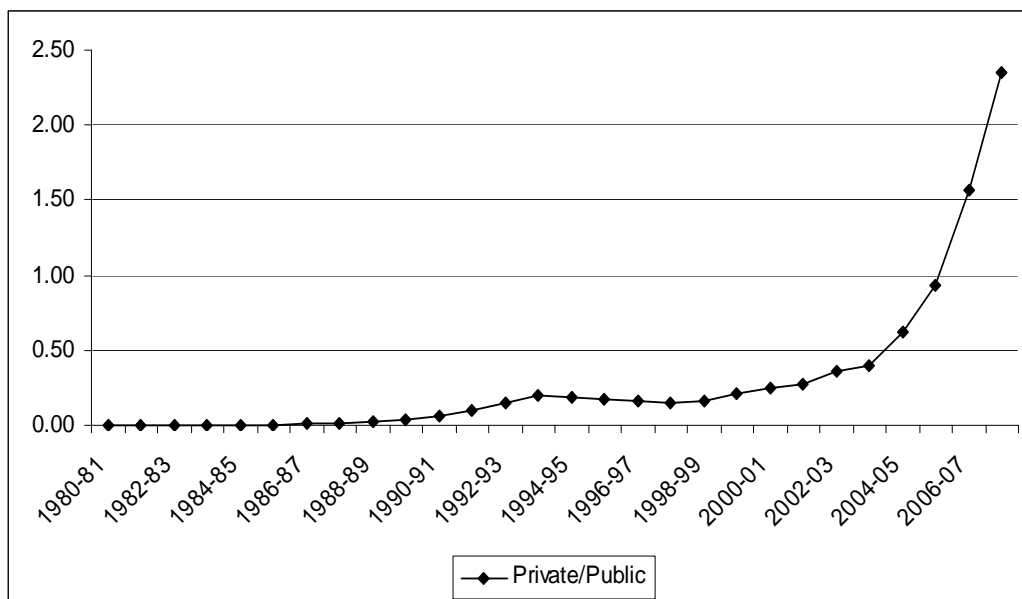
**Figure 18**  
**Distribution of Services 1 GDP at Current Prices**



**Figure 19**  
**Distribution of GDP at Current Prices from Real estate, Ownership of Dwellings and Business Services**



**Figure 20**  
**Ratio of Private Sector GDP to Public Sector GDP at Current Prices in Communication**



## 6. Phases of Growth and Structural Change: A Summing Up

Drawing together everything discussed above, one can say that the post-independence process of growth and structural change in India has gone through four phases:

- **Phase 1: Independence to Mid-1960s** – Acceleration in growth and structural change driven chiefly by the industrial sector.
- **Phase 2: Mid-1960s to 1980** – Slackening of the momentum of industrial growth and the winding down of the Phase 1 trajectory.
- **Phase 3: 1980 to Early and Mid-1990s** – Second stage growth acceleration accompanied by shift towards services dominated growth. Rising share of public sector as the main source of increasing share of services in GDP.
- **Phase 4: Mid-1990s onwards** – Private Organized sector led decisive reinforcement of services dominated growth trajectory.

This periodization of India's post-independence economic history points towards the importance of going beyond relating the dynamics of the Indian economy to the degree to which the prevalent economic policy regime was interventionist or liberal in different periods. Let us see some of the reasons why.

The history of an industrial sector driven process of growth acceleration and structural change was a very short one in India, limited to the decade and a half right at the beginning of our reference period. The policy regime at that time was interventionist, and it remained so even as the momentum of industrialization ebbed. Industrialization, however, continued to remain held back despite subsequent liberalization in policy and even the transition from an agriculture dominated to services dominated economy. That is what makes the mid-1960s turning point one of the most significant ones in the history of Indian industrialization. Clearly India's limited industrialization is a long-term story related to constraints embedded in her economic structure, which neither the actual interventions nor liberalization have been able to eliminate. It is these constraints that need to be investigated if we are to move towards properly understanding the peculiarity of Indian economic change.

The acceleration in trend growth after 1980 only re-emphasizes this peculiarity. It was associated with another break with the pattern of the previous three decades in the form of a shift towards the increasing service orientation of non-agricultural growth. In other words, it was in services growth rather than industrial growth that a long-term transition occurred. How and why did such a transition occur? Why did the constraints that continued to impede industrialization not prevent this transition in the case of services? Equally, why did the rapid growth of services not itself spur a more rapid industrialization process? These are some of the important questions posed by the post-1980 experience of growth and structural change.

Explaining accelerated growth after 1980 as a consequence of liberalization of economic policy has always confronted one major problem. This is the absence of any significant upward shift in the trend growth rate of the Indian economy to the decidedly more major liberalization of the 1990s. The fact that this acceleration was not rooted in industrialization but rather a shift towards services only adds to the difficulties of policy shift based explanations, at least of the usual kind. This is especially because the initial service orientation of growth related to an expanding public sector, which negates even the story of the 1980s being the result of an increasing 'pro-business' orientation as a prelude to the 'pro-market' orientation after 1991. In fact, it is hard to separate the pre- and post-1991 growth phases on a pro-business versus pro-market basis. The most important breaks between the first to the second are actually the shift from public sector to private sector driven growth of services, and the decisive shift of the private organized sector towards services. Thus, the private sector role in growth becomes prominent from the mid-1990s, but it only reinforced an already existing tendency towards services-dominated growth. Moreover, given the direct and indirect role of the public sector in the development of many of the areas of rapid service growth, there may exist other

deeper continuities between the 1980s and later. Further, the roots of such a public sector role may even lie in the interventions of even the pre-1980 period.

All these, of course, do not suggest that state economic policy was unimportant or irrelevant to the Indian story of economic change. They do, however, remind us that economic contexts with which are associated definite tendencies cannot be defined or distinguished merely or primarily by whether the prevailing policy regime has an interventionist or a liberal essence. Neither kind of policy succeeded in ensuring India's full-fledged industrialization, but both appear to have played a role in fuelling or facilitating the exceptional expansion of services. Insofar as this somewhat paradoxical combination of tendencies has been the hallmark of the Indian story of output growth and structural change after independence, a simple policy-regime centred explanation of that story is clearly inadequate.

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# **INDUSTRY AND SERVICES IN GROWTH AND STRUCTURAL CHANGE IN INDIA**

## **Some Unexplored Features**

**Surajit Mazumdar**

This paper forms part of three year ongoing Research Programme  
**Structural Changes Industry and Employment in the Indian Economy:**  
*Macro-Economic Implications of Emerging Pattern*  
*sponsored by the*  
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## CONTENTS

<i>Abstract</i>	1
1. Growth, Structural Change and the Indian Economy: A Brief Introductory Overview	2
2. Data Sources	5
3. The Issue of Industrial Classification	6
4. The Mid-1960s Collapse: The Beginning of the End of Industrialization Centred Growth and Structural Change?	13
5. Services Dominated Growth: The Transition from Public to Private Sector Led	16
6. Phases of Growth and Structural Change: A Summing Up	23
References	26

### *List of Figures*

<i>Figure 1</i>	Percentage Share of Industry and its Components in GDP at Current Prices	8
<i>Figure 2</i>	Percentage Share of Registered and Unregistered Manufacturing in GDP at Current Prices	8
<i>Figure 3</i>	Percentage Share of Industry and its Components in GDP at 1999–00 Prices	10
<i>Figure 4</i>	Percentage Share of Registered and Unregistered Manufacturing in GDP at 1999–00 Prices	10
<i>Figure 5</i>	Ratio of Services GDP to Industrial GDP at Current Prices	12
<i>Figure 6</i>	Ratio of Services GDP to Industrial GDP at 1999–00 Prices	12
<i>Figure 7</i>	Average Growth Rate over 15-Year Period in Year Ending 1964–65 to 2007–08 (GDP at 1999–00 prices) – 1	14
<i>Figure 8</i>	Average Growth Rate over 15-Year Period in Year Ending 1964–65 to 2007–08 (GDP at 1999–00 prices) – 2	15
<i>Figure 9</i>	Average Growth Rate over 15-Year Period in Year Ending 1964–65 to 2007–08 (GDP at 1999–00 prices) – 3	15

<i>Figure 10</i>	Distribution of Unorganized Sector NDP at Current Prices	16
<i>Figure 11</i>	Distribution of Organized Sector NDP at Current Prices	17
<i>Figure 12</i>	Shares in Public Sector NDP	18
<i>Figure 13</i>	Shares in Private Organized NDP	18
<i>Figure 14</i>	Ratio of Private Organized NDP to Public Sector NDP	19
<i>Figure 15</i>	Shares in Non-Agricultural NDP	20
<i>Figure 16</i>	Shares in Services 1 NDP	20
<i>Figure 17</i>	Shares in Services 2 NDP	21
<i>Figure 18</i>	Distribution of Services 1 GDP at Current Prices	22
<i>Figure 19</i>	Distribution of GDP at Current Prices from Real estate, Ownership of Dwellings and Business Services	22
<i>Figure 20</i>	Ratio of Private Sector GDP to Public Sector GDP at Current Prices in Communication	23

#### *List of Tables*

<i>Table 1</i>	Percentage Shares in GDP at Current Prices	9
<i>Table 2</i>	Percentage Shares in GDP at 1999–00 Prices	11
<i>Table 3</i>	Contribution to Point-to-Point Increase in GDP	13



# INDUSTRY AND SERVICES IN GROWTH AND STRUCTURAL CHANGE IN INDIA

## Some Unexplored Features

*Surajit Mazumdar\**

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*[Abstract: This paper briefly presents an analytical description of the twin processes of growth of output and change in its composition in the Indian economy since independence, by looking at the time-paths of the two dimensions simultaneously. It suggests that three turning points located respectively in the mid-1960s, 1980, and the mid-1990s separate the entire period after independence into four sequential phases of growth and structural change. This periodization of India's post-independence economic history points towards the need to go beyond relating the dynamics of the Indian economy to exclusively the degree to which the prevalent economic policy regime was interventionist or liberal in different periods.]*

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This paper briefly presents an analytical description of the twin processes of growth of output and change in its composition in the Indian economy since independence. The emphasis is on description, and whatever interpretation is involved relates to mainly how the six-decade long story is presented. Its purpose is to add some twists in the known tales of post-independence growth and structural change in and their key turning points by looking at the time-paths of the two dimensions simultaneously. This can bring out in sharper relief some of the key questions posed by what appears to have been a rather uniquely Indian trajectory of economic change. The paper suggests that three turning points located respectively in the mid-1960s, 1980, and the mid-1990s separate the entire period after independence into four sequential phases of growth and structural change. The period before 1980 was characterized by a relatively slower pace of aggregate growth than the one after, but at the same time it was the period in which the industrial sector played a prominent role in driving the process of growth and structural change in output. This was, however, a more pronounced feature of the phase from

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independence to the mid-1960s, after which the tendency lost steam. The period of accelerated growth after 1980 was accompanied by the replacement of industry by services as the sector playing the most prominent role. Initially, however, it was the expansion of the public sector which chiefly underlay this increased importance of services in the process of growth and structural change. From the mid-1990s the services oriented trajectory was reinforced with the private organized sector decisively replacing the public sector as the driving force behind it.

## **1. Growth, Structural Change and the Indian Economy: A Brief Introductory Overview**

That major structural shifts in output and employment always accompany a sustained and rapid growth of per capita output of a country has been an established truism since the original studies of economic growth by Fisher, Clark and Kuznets<sup>1</sup>. Such structural shifts have been seen as mechanisms influencing the pace of growth as well as being the result of growth. Either of the two tripartite divisions of the economy closely resembling each other—the primary-secondary-tertiary or agriculture-industry-services divisions—have been used to describe the typical pattern of structural change associated with what Kuznets called modern economic growth<sup>2</sup>. This typical pattern involves initially a shift from an agricultural to an industrial economy through industrialization—an increase in the share of the industrial/secondary sector in output and employment combined with a declining importance of the agriculture/primary sector. The subsequent post-industrialization or de-industrialization stage is one whose chief feature is the rising importance of the services/tertiary sector, even at the expense of industry, or the transition to a service economy<sup>3</sup>.

A variety of factors have been highlighted in attempts to explain the observed association between growth and structural shifts in output and employment<sup>4</sup>. On the demand side, the operation of Engel's Law leading to shifts in the pattern of demand as incomes rise has been one such factor. On the supply side, inherently differential productivities and productivity growth of the three sectors has been advanced as an important source of this association. The growing demand of firms for services and increasing outsourcing of these have also been highlighted as important in explaining at least the eventual shift towards services. While these explanatory factors do indicate why

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<sup>1</sup> Fisher (1935,1952), Clark (1940/1951, 1949), Kuznets (1972)

<sup>2</sup> Soubbotina and Sheram (2000)

<sup>3</sup> Riddle (1986), however, emphasized the continuous importance of services.

<sup>4</sup> Apart from those of the pioneers, some of the other major works are Kaldor (1967), Baumol (1967), Fuchs (1968), and Rowthorn and Ramaswami (1997). Schettkat and Yocarini (2003) provide a review of the literature on the shift towards services.

structural changes in output and employment are an inevitable part of economic growth, it remains unclear why their patterns cannot be different for countries making their transitions to rapid and sustained growth at very different points of time and under very different technological and trade contexts. However, leaving aside the Indian case, the historical experience of not only developed countries but also developing economies appears to support the case for there being a *universal* pattern<sup>5</sup>.

The only significant difference in the situation of late-industrializing developing countries in comparison to developed countries that is acknowledged relates to the employment potential of industrialization<sup>6</sup>. For a late-starting country with access to high-productivity capital-intensive technology from developed countries, this potential is considerably reduced if output expansion is based primarily on the domestic market. The implication of this is that in developing countries the process of shift in employment away from agriculture becomes slower, while the de-industrialization and tertiarization of employment can begin at lower levels of income than it had in the case of developed countries.

Generally the literature on India's growth history has been preoccupied with the issue of turning points in growth rates rather than with the structural changes accompanying them. A parallel discourse, however, exists on the phenomenon of services rather than industry accounting for an extraordinarily large share of the expansion of non-agricultural output in India. As regards growth rates, two major turning points have been referred to<sup>7</sup>. While it has been debated as to which was the more important and significant one, the status of both as key turning points has not been questioned. The first is associated with independence and the transition from the stagnation of the colonial era to the 'Hindu rate of growth'. It is only with this that anything that could be described as modern economic growth began in India. The second turning point is 1980, after which the Indian economy appears to have graduated to a higher trend growth of 5.5–6% per annum. One could also say that the early years of the current century saw a third turning point with GDP growth rates accelerating further. However, in the background of the current slow-down which has set in within a few years of the appearance of 8–9 per cent growth rates, there are questions about whether 2003–04 initiated a long-term shift in the

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<sup>5</sup> Chenery and Syrquin (1975), UNCTAD (2003), United Nations (2006)

<sup>6</sup> UNCTAD (2003)

<sup>7</sup> The second of these has been focused on by many and finds particular reference in the context of the debate on the significance of the 1990s liberalization in the growth turnaround [Acharya (2007), DeLong (2003), Virmani (2004 a and b), Sinha and Tejani (2004), Rodrik and Subramanian (2005), Srinivasan (2005), Panagariya(2004), Kohli (2006 a and b), Kaur (2007), and Wallack (2003)]. Others have, however, stressed on the first being the more important turning point [Hatekar and Dongre (2005) and Nayyar (2006)].

same way as did the previous two turning points. In this paper we focus on these two earlier ones, suggesting however that they were fundamentally different in nature from each other because of the pattern of structural change in output that accompanied the rise in the growth rate. In other words, independence and 1980 were turning points in more senses than one.

When the large role of services in Indian growth was first noted, it tended to be described as “disproportionality” or an “excess growth” of services<sup>8</sup>. Currently, many are prone to term it as India’s “services revolution”<sup>9</sup>. The phenomenon has also provoked a lot of debate regarding the factors explaining it, its desirability and long-term sustainability<sup>10</sup>. It has also led to the raising of the question—Is India pioneering a new pattern where services can play the same role as industry had for other countries in the past?<sup>11</sup> Measurement issues have also come under the scanner—How much of the growth of services is real and how much purely statistical?<sup>12</sup> Whatever be one’s preferred viewpoint on these issues, however, there is little doubt that the exceptional growth of services makes the Indian case of structural change an odd one, an exception to the general rule. Two widely noted features have marked out this oddness. The first is the premature nature of the transition to a services dominated economy, at an exceptionally low level of per capita income and without achieving full-fledged industrialization. The second is that the large share of services in output has not been matched by a corresponding one in employment. These have of course distinguished the Indian case from the experience of the developed countries, where *both* the attainment of high levels of industrialization and the shift of *employment* towards services preceded the decisive shift towards tertiarization of output<sup>13</sup>. It has also, however, been shown that the prominence of services in India distinguishes it from many other Asian developing countries experiencing growth over the same period<sup>14</sup>. One may add to this that the increasing importance of services in India is also not comparable with a similar trend in Latin America since the 1980s. One reason for this is because of the significantly higher levels of per capita income in Latin America. But more importantly, de-industrialization and the shift towards services in Latin America was associated with a significant slowing down of growth<sup>15</sup>. This is certainly not true for India. This paper shall in fact highlight

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<sup>8</sup> Mitra (1988), Bhattacharya and Mitra (1990)

<sup>9</sup> Gordon and Gupta (2004), World Bank (2004)

<sup>10</sup> Papola (2006), Banga (2005), Joshi (2004)

<sup>11</sup> Dasgupta and Singh (2005)

<sup>12</sup> Nagaraj (2009), Shetty (2007)

<sup>13</sup> It is only after 1970s and slowing down of growth that services share in output has increased.

<sup>14</sup> Papola (2006)

<sup>15</sup> UNCTAD (2003)

that the Indian story is quite the opposite—the shift coincides with the transition around 1980 to a higher growth path.

This coincidence has perhaps not received adequate attention either in the discussions on Indian growth or those on the phenomenal growth of services, though a relationship between continuous acceleration in services and aggregate growths since independence has been referred to<sup>16</sup>. In fact, one finds that there is little clear cut discussion on the issue of dating the beginnings of the shift towards services in India. Different authors have located it at widely different points of time. For example, Mitra thought it began in the mid-1970s, while Rakshit and some others see it as mainly a phenomenon emerging from the mid-1990s<sup>17</sup>. This paper shall, however, make the case that the original shift was around 1980 and both this and the accompanying acceleration in overall growth rate separates the period after it from that before. However, there are discontinuities within the two broad phases of the post-independence period on either side of 1980. It is in that context that the turning point in the mid-1990s, as also another one in the mid-1960s, is important. Indeed, both acquire a new significance not normally attached to them.

The mid-1960s is usually seen as marking the end of the first phase of rapid industrial growth after independence, which was followed by the decade of stagnation from which recovery happened in the late 1970s to the early 1980s. This paper will, however, suggest that what ended in the mid-1960s was also a chapter of India's growth and structural change that has never been repeated since, and from which a decisive break took place after 1980. The beginning of the 1990s, it is now widely accepted, represented a significant break in Indian economic policy but this had no discernible impact on its growth trend. This paper does not contest that view. It will, however, argue that following liberalization, most sharply from the mid-1990s, the pattern of growth in India did shift in important ways that actually decisively reinforced the trajectory that had been prevalent since 1980.

## 2. Data Sources

The analysis presented in this paper is based entirely on data drawn from the CSO's National Accounts Statistics (NAS), 1999–00 base year series. NAS 2008 and 2009, and the NAS 1999–00 base year back series, between themselves cover the entire period, 1950–51 to 2007–08, and it is from these that data at both at current prices as well as constant 1999-00 prices are taken for this paper.

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<sup>16</sup> Mohan (2008)

<sup>17</sup> Mitra (1988), Rakshit (2007)

### 3. The Issue of Industrial Classification

As mentioned earlier, the analysis of structural change in output over time is normally based on a division of the economy into agriculture-industry-services or primary-secondary-tertiary sectors. This paper uses the former. The demarcation of the industrial sector from the services sectors has, however, never been an easy matter. Thus, Simon Kuznets included transport and communication in industry while Colin Clark put even construction in the category of services. Riddle included even utilities in services. The general practice that has come to be established, however, is to include construction and utilities in industry, along with mining and manufacturing, and all other non-agricultural activities including transport and communication in services.

The choice of classification scheme is, of course, something extremely important because it can affect the conclusions one draws about the patterns of structural change accompanying growth. It could also perhaps be argued that meaningful classification schemes may need to be contextualized in space and time as the nature of activities making up each broad sector and their characteristics, the relative importance of different activities making up any sector, and the relationships between the growths of different activities are all variable. Software services, for instance, may be an important component of services today, but nothing of equivalent nature existed earlier. At one time non-tradability was almost a defining characteristic of services, but that is no longer true. The growth of transport and communication in an earlier era meant the expansion of railways and the telegraph. Today the growth of aviation and mobile telephony may be the driver of growth in the same sector. The linkages between industrial growth and the expansion of such services, and maybe even between the former and construction, in the contemporary world are unlikely to be of the same kind as the past relationship between industrialization and railway expansion.

This paper, however, will not enter into a minefield by trying to address complications of the kind indicated by the above. Instead, it will generally follow the conventional classification of activities into the three broad sectors. However, as shall subsequently become clear, there are some practical problems associated with including construction in industry. To circumvent these, an approach of using two parallel classification schemes is adopted. Thus, the economy is divided into agriculture-industry 1-services 1 in one classification and agriculture-industry 2-services 2 in the other.

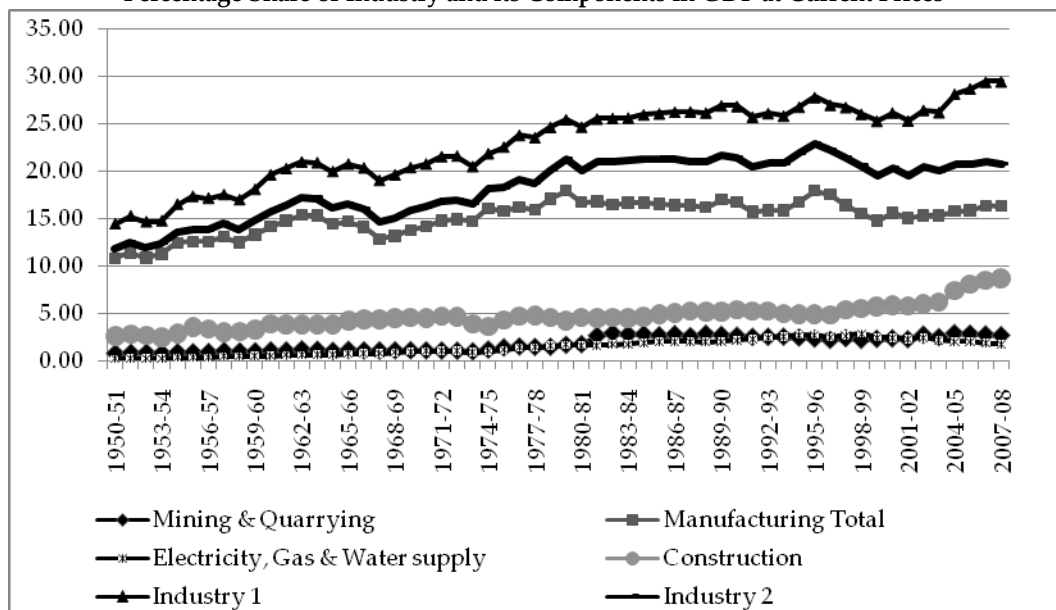
1. **Agriculture** – Agriculture, Forestry and Fishing (1)
2. **Industry 1** – Mining and Quarrying (2); Manufacturing (3); Electricity, Gas and Water Supply (4); Construction (5)
3. **Industry 2** – Industry 1 excluding Construction
4. **Services 1** – Trade, Hotels and Restaurants (6); Transport, Storage and Communication (7); Financing, Insurance, Real Estate and Business Services (8); Community, Social and Personal Services (9)
5. **Services 2** – Services 1 and Construction

*Note:* Numbers in Brackets Refer to the Relevant Industry Codes.

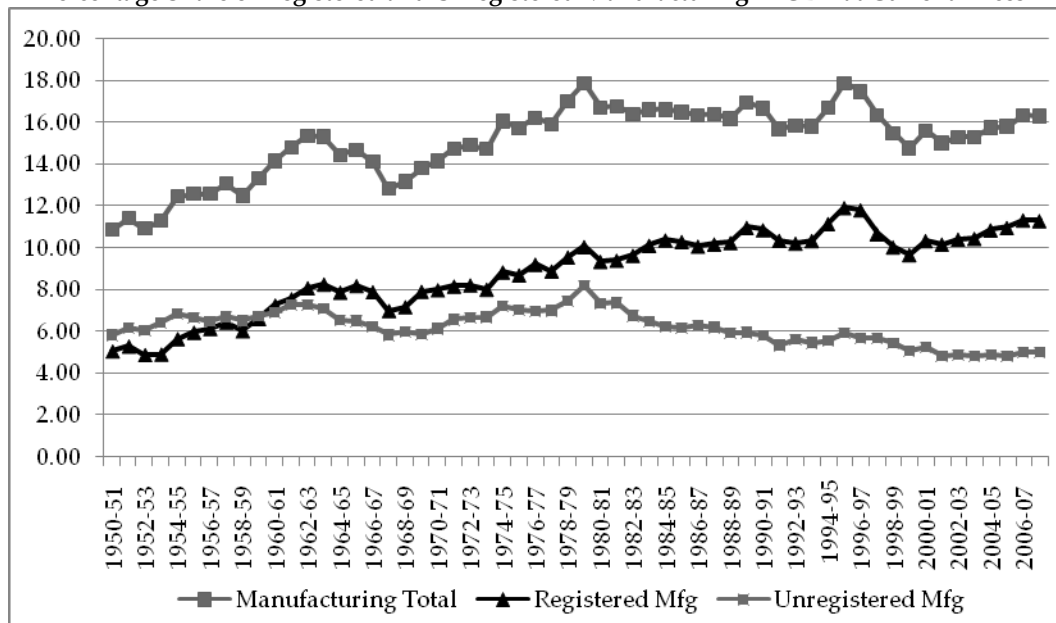
Figure 1 shows the movement in the share of the industrial sector in GDP at current prices over the entire reference period. A noticeable difference can be seen to emerge between the trends for Industry 1 and Industry 2 towards the very end of the period—in the phase of very high growth after 2002–03. Thus, while Industry 1's share in GDP attained its highest level in 2007–08, Industry 2 crossed its peak level much further back, in 1995–96. This difference is obviously attributable to the fact that construction is included in the first, but not in the second. However, what is noteworthy is that it is only the construction sector whose share in GDP attained its highest value in 2007–08. For all other components of the industrial sector these peak values were earlier. The same is also true of the registered and unregistered segments of the manufacturing sector seen separately (Figure 2). The pattern of movement of the share of Industry 2 is thus more representative of the pattern exhibited by the entire industrial sector barring construction, as also its most important component, namely manufacturing.

Table 1 brings out the above clearly by showing that except for construction, the peak values of the share in GDP, all components of the industrial sector were attained within the period stretching from 1979–80 to 1995–96. It, in addition, demonstrates that a substantial part of the change in the share of the industrial sector, and its components other than construction, in GDP occurred between 1950–51 and 1979–80. The picture subsequently is of relative stability. This is in contrast to the pattern exhibited by the share of services in GDP, which increases to a greater extent after 1979–80 than before, like in the case of construction. In fact, it is virtually entirely services and construction that account for the increase in the share of non-agriculture after 1979–80. In contrast, in the earlier period industry had accounted for half or more of this increase.

**Figure 1**  
**Percentage Share of Industry and its Components in GDP at Current Prices**



**Figure 2**  
**Percentage Share of Registered and Unregistered Manufacturing in GDP at Current Prices**





**Table 1**  
**Percentage Shares in GDP at Current Prices**

<i>Item</i>	<i>Peak Value of Share in Aggregate GDP</i>		<i>Share in Aggregate GDP in:</i>			<i>Change in Percentage Share</i>	
	<i>Year</i>	<i>Percentage Share</i>	<i>195–51</i>	<i>1979–80</i>	<i>2007–08</i>	<i>1950–51 to 1979–80</i>	<i>1979–80 to 2007–08</i>
Mining & Quarrying	1982–83	2.95	0.77	1.68	2.72	0.91	1.03
	2004–05	2.95					
Manufacturing Total	1979–80	17.89	10.87	17.89	16.32	7.03	-1.57
	1995–96	17.88					
<i>Registered Mfg</i>	1995–96	11.93	5.08	10.07	11.31	4.98	1.24
<i>Unregistered Mfg</i>	1979–80	8.2	5.84	8.20	5.01	2.36	-3.19
Electricity, Gas & Water supply	1998–99	2.84	0.24	1.69	1.76	1.46	0.07
Construction	2007–08	8.71	2.56	4.20	8.71	1.64	4.51
<b>Industry 1</b>	<b>2007–08</b>	<b>29.51</b>	<b>14.44</b>	<b>25.47</b>	<b>29.51</b>	<b>11.03</b>	<b>4.04</b>
<b>Industry 2</b>	<b>1995–96</b>	<b>22.93</b>	<b>11.87</b>	<b>21.27</b>	<b>20.80</b>	<b>9.39</b>	<b>-0.47</b>
<b>Services 1</b>			<b>32.73</b>	<b>40.85</b>	<b>52.38</b>	<b>8.12</b>	<b>11.53</b>
<b>Services 2</b>			<b>35.29</b>	<b>45.05</b>	<b>61.09</b>	<b>9.76</b>	<b>16.04</b>
<b>Non-Agriculture</b>			<b>47.17</b>	<b>66.32</b>	<b>81.89</b>	<b>19.15</b>	<b>15.57</b>

The picture presented above does not change significantly if constant price figures are used instead of current price ones. Figures 3 and 4 and Table 2 based on data at 1999–00 prices are near mirror images of Figures 1 and 2 and Table 1 respectively. The only notable differences are the following. Firstly, the difference between Industry 1 and Industry 2 is less sharp in this case, with the share in GDP of even Industry 1 also peaking in 1995–96. Secondly, at constant prices the difference between the movements of the shares in GDP of construction and other components of Industry 1 in the pre- and post-1980 periods also disappears. What these reflect is that the sharp rise of the output share of construction (at current prices) in recent times reflected both a rapid real growth as well as a relatively faster increase of its prices. Moreover, because it was preceded by a phase where its real share in the economy was declining, the recent rapid real growth of the construction sector has not had a dramatic impact on that share when seen over a longer time period. The important point, however, is that all of these only reinforce the fact that the process of structural change after 1979–80 has lacked the *industrial* character that was visible earlier.

Figure 3  
Percentage Share of Industry and its Components in GDP at 1999–00 Prices

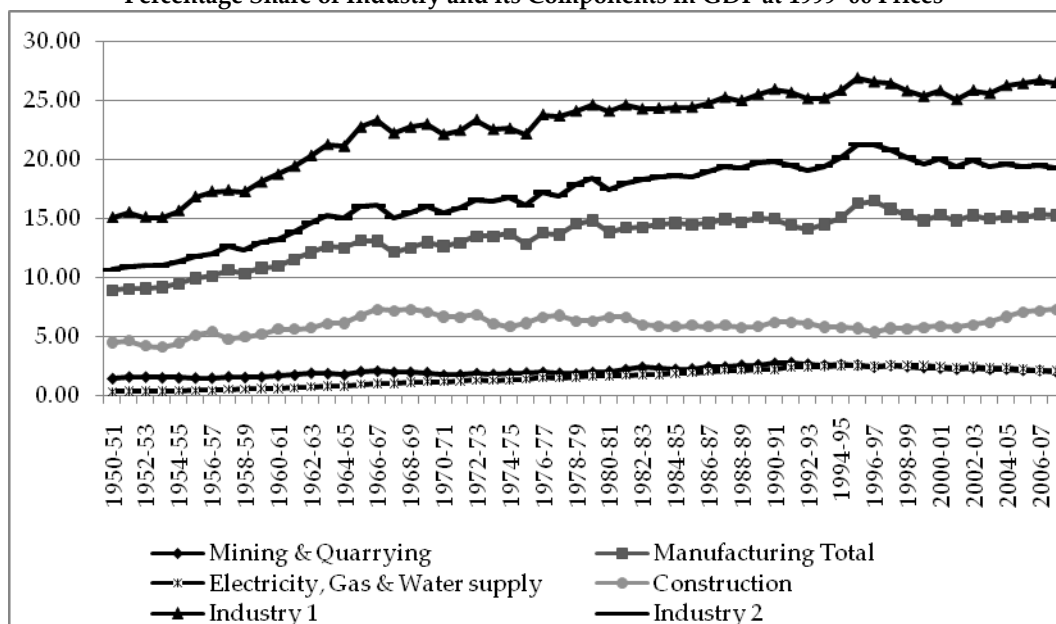
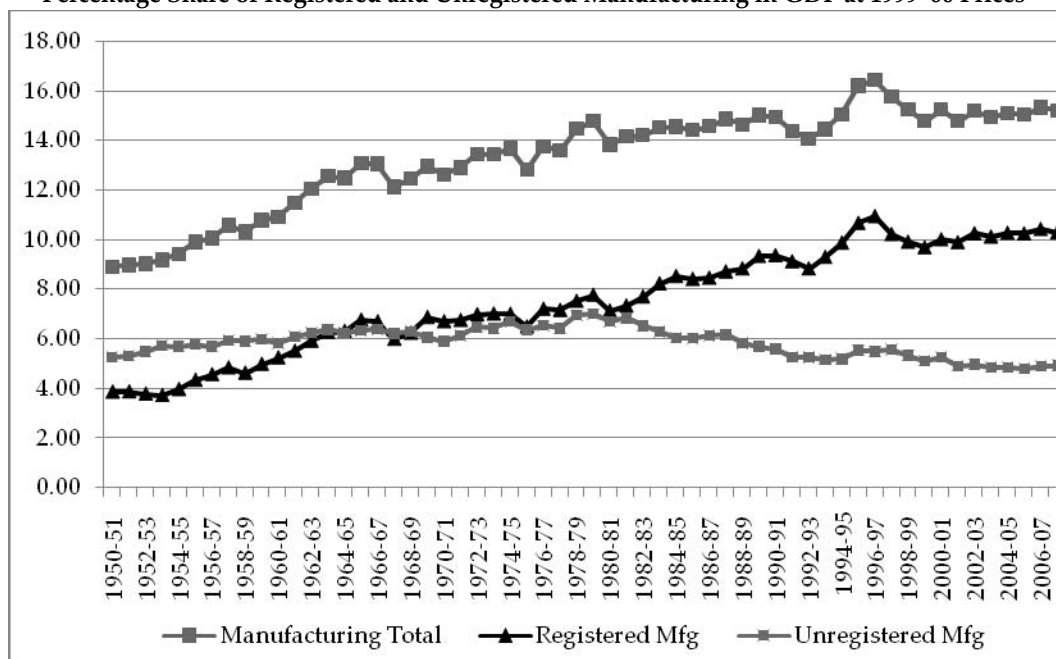


Figure 4  
Percentage Share of Registered and Unregistered Manufacturing in GDP at 1999–00 Prices



**Table 2**  
**Percentage Shares in GDP at 1999–00 Prices**

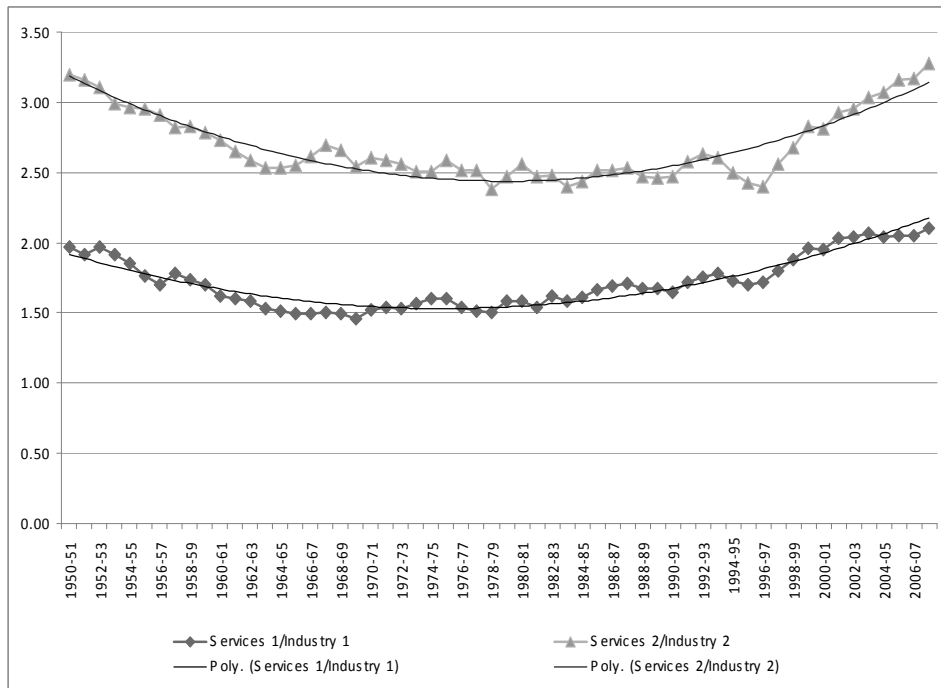
<i>Item</i>	<i>Peak Value of Share in Aggregate GDP</i>		<i>Share in Aggregate GDP in:</i>			<i>Change in Percentage Share</i>	
	<i>Year</i>	<i>Percentage Share</i>	<i>1950–51</i>	<i>1979–80</i>	<i>2007–08</i>	<i>1950–51 to 1979–80</i>	<i>1979–80 to 2007–08</i>
Mining & Quarrying	1991–92	2.73	1.41	1.92	1.98	0.51	0.06
Manufacturing Total	1996–97	16.44	8.90	14.79	15.22	5.89	0.43
Registered Mfg	1996–97	10.94	3.85	7.77	10.29	3.91	2.52
Unregistered Mfg	1979–80	6.99	5.25	6.99	4.93	1.74	-2.06
Electricity, Gas & Water supply	1997–98	2.51	0.31	1.63	2.04	1.33	0.40
	1998–99	2.51					
Construction	1968–69	7.21	4.42	6.25	7.23	1.83	0.99
	2007–08	7.23					
<b>Industry 1</b>	<b>1995–96</b>	<b>26.87</b>	<b>15.03</b>	<b>24.59</b>	<b>26.47</b>	<b>9.55</b>	<b>1.88</b>
<b>Industry 2</b>	<b>1995–96</b>	<b>21.24</b>	<b>10.62</b>	<b>18.34</b>	<b>19.24</b>	<b>7.73</b>	<b>0.89</b>
<b>Services 1</b>			<b>29.55</b>	<b>39.05</b>	<b>55.73</b>	<b>9.50</b>	<b>16.68</b>
<b>Services 2</b>			<b>33.96</b>	<b>45.29</b>	<b>62.96</b>	<b>11.33</b>	<b>17.67</b>
<b>Non-Agriculture</b>			<b>44.58</b>	<b>63.64</b>	<b>82.20</b>	<b>19.05</b>	<b>18.56</b>

The focus on 1979–80 or 1980 as the dividing line is not arbitrary. Quite apart from the fact that it very neatly divides our entire reference period into two sub-periods of virtually identical time spans is the following. The movement of ratio of services GDP to industrial GDP at both current and constant prices exhibits a U-shaped pattern (Figures 5 and 6) with the base of the U being around 1980.

**Figure 5**  
Ratio of Services GDP to Industrial GDP at Current Prices



**Figure 6**  
Ratio of Services GDP to Industrial GDP at 1999-00 Prices



In other words, even as growth accelerated after 1980, accompanying it was a clear reversal in the direction of movement of the composition of the non-agricultural sector. Table 3 sums this up by showing that like in the pattern of structural change, the growth process of the economy as a whole as well as of its non-agricultural component were much less industrial after 1980 than before. This is despite the fact that at independence the share of the industrial and manufacturing sectors in the economy was much smaller than in 1980. Services, which accounted for a significantly larger share of output in 1950–51, did not, however, contribute as much to growth before 1980 as it has done after that.

**Table 3**  
**Contribution to Point-to-Point Increase in GDP**

<i>Item</i>	<i>Percentage Contribution to Total GDP Growth</i>		<i>Percentage Contribution to Non-Agricultural Growth</i>	
	<i>1950–51 to 1979–80</i>	<i>1979–80 to 2007–08</i>	<i>1950–51 to 1979–80</i>	<i>1979–80 to 2007–08</i>
Mining & Quarrying	2.23	1.99	2.97	2.30
Manufacturing Total	18.33	15.32	24.41	17.69
<i>Registered Mfg</i>	10.12	10.88	13.48	12.57
<i>Unregistered Mfg</i>	8.03	4.44	10.69	5.13
Electricity, Gas & Water supply	2.43	2.13	3.23	2.46
Construction	7.34	7.46	9.78	8.62
<b>Industry 1</b>	<b>30.33</b>	<b>26.91</b>	<b>40.39</b>	<b>31.08</b>
<b>Industry 2</b>	<b>22.98</b>	<b>19.45</b>	<b>30.61</b>	<b>22.46</b>
<b>Services 1</b>	<b>44.76</b>	<b>59.68</b>	<b>59.61</b>	<b>68.92</b>
<b>Services 2</b>	<b>52.10</b>	<b>67.14</b>	<b>69.39</b>	<b>77.54</b>
<b>Non-Agriculture</b>	<b>75.08</b>	<b>86.59</b>	<b>100.00</b>	<b>100.00</b>

#### **4. The Mid-1960s Collapse: The Beginning of the End of Industrialization Centred Growth and Structural Change?**

Since the above analysis has indicated that the industrial sector played a more prominent role in the process of growth and structural change before 1980, it is only natural that note is taken of the fact that the pace of industrial growth was highly uneven within that period. Indeed, one of the remarkable features of that period is that it includes both the decade of industrial stagnation as well as the decade and a half with the highest rate of industrial growth achieved after independence. The latter is shown by Figure 7, which plots the average growth rate of *all* possible 15-year periods whose starting and ending years fell between 1950–51 and 2007–08. The first of these 15-year periods stretches from 1950–51 to 1964–65, the second from 1951–52 to 1965–66, the third from 1952–53 to 1966–

67 and so on till the last one from 1993–94 to 2007–08. The figure shows that the high values of the initial few 15-year periods gave way to a sharp decline thereafter as a result of the industrial slow-down from the mid-1960s onwards. The revival of industrial growth from the late 1970s or so then gradually pushed up the previous 15-year growth rates. Another half-decade slow-down from the second half of the 1990s, however, resulted in another dip before the previous 15-year growth rate could reach the initial high levels. Further, even though this slow-down was followed by a period of extremely rapid industrial growth from 2003–04 till 2007–08, it still did not carry the previous 15-year growth rate till 2007–08 past those levels. Thus, one may say that the rates of industrial growth achieved before the mid-1960s collapse, roughly covering the period of the first three plans, were not replicated in any subsequent 15-year period. This conclusion emerges even more sharply if we consider Industry 2 rather than Industry 1.

**Figure 7**  
**Average Growth Rate over 15-Year Period in Year Ending 1964–65 to 2007–08**  
**(GDP at 1999–00 prices) – 1**

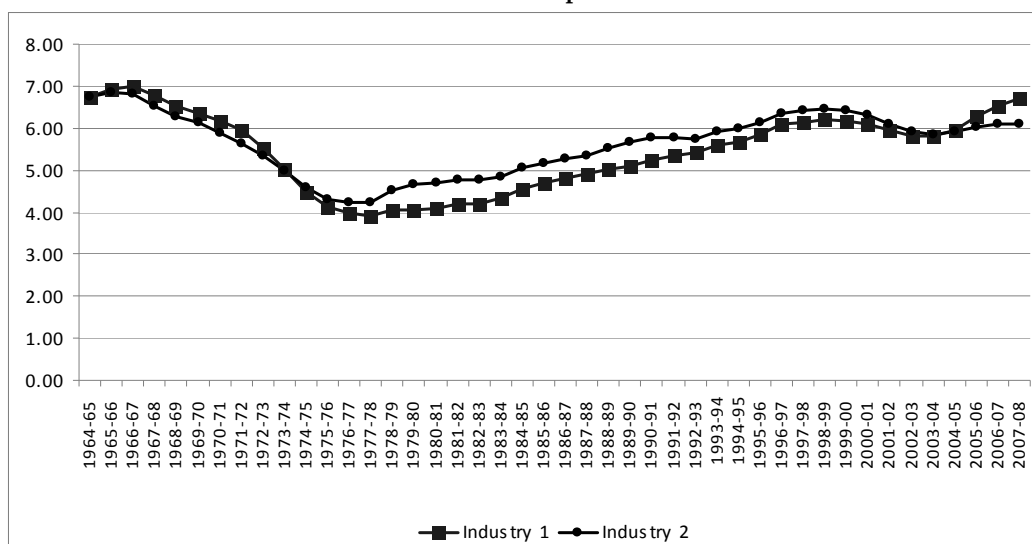
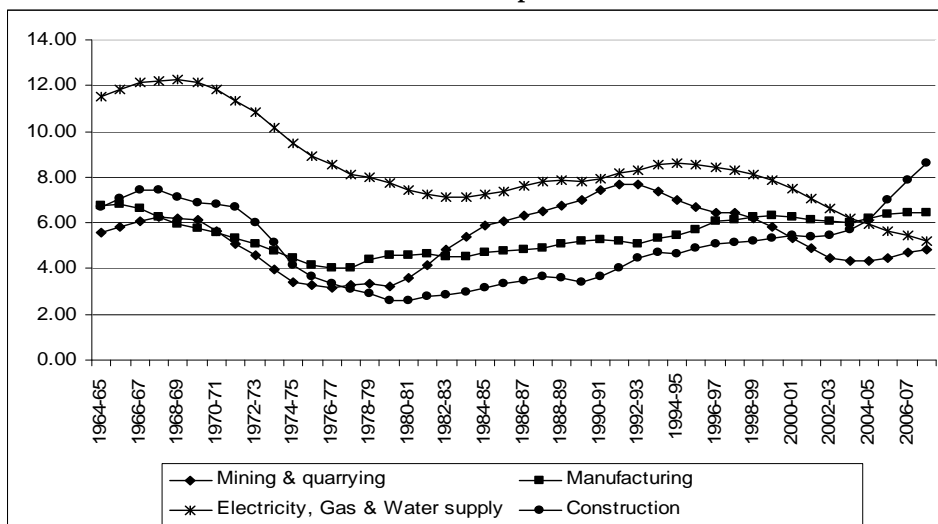


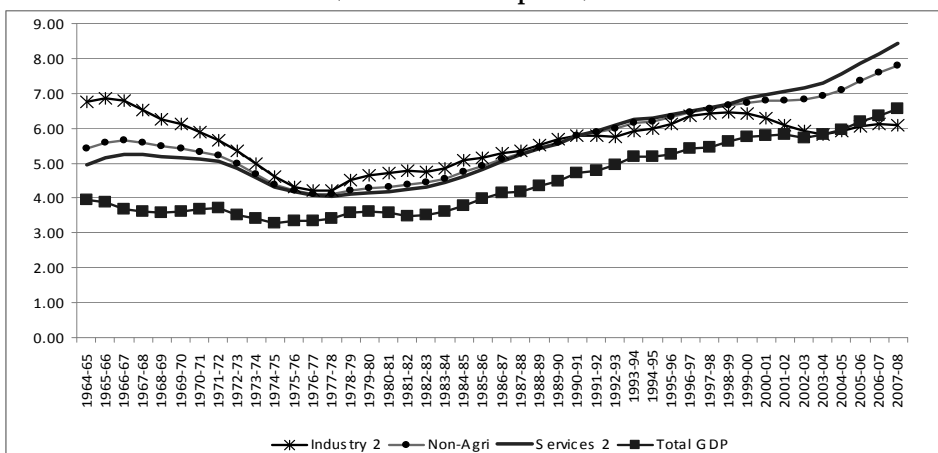
Figure 8 further shows that behind the above-mentioned pattern of 15-year industrial growth rates is the failure of the manufacturing and the electricity sectors to attain ever again the growth rates of the Nehruvian period. Moreover, the increase in the share of the industrial sector in GDP was more significant up to the mid-1960s than after.

**Figure 8**  
**Average Growth Rate over 15-Year Period in Year Ending 1964–65 to 2007–08**  
**(GDP at 1999–00 prices) – 2**



The pattern of the post-independence 15-year growth rates of services is similar to that of the industrial sector to the extent that it too exhibited a dip after the mid-1960s before moving upwards after 1980. The difference is that this upward movement in the case of services was sharper, and the steady rise in the 15-year growth rates in every successive period has carried it to a level far higher than in the initial periods. Indeed, if the patterns of the industrial and services sectors are juxtaposed to each other (Figure 9), then the following emerges.

**Figure 9**  
**Average Growth Rate over 15-Year Period in Year Ending 1964–65 to 2007–08**  
**(GDP at 1999–00 prices) – 3**

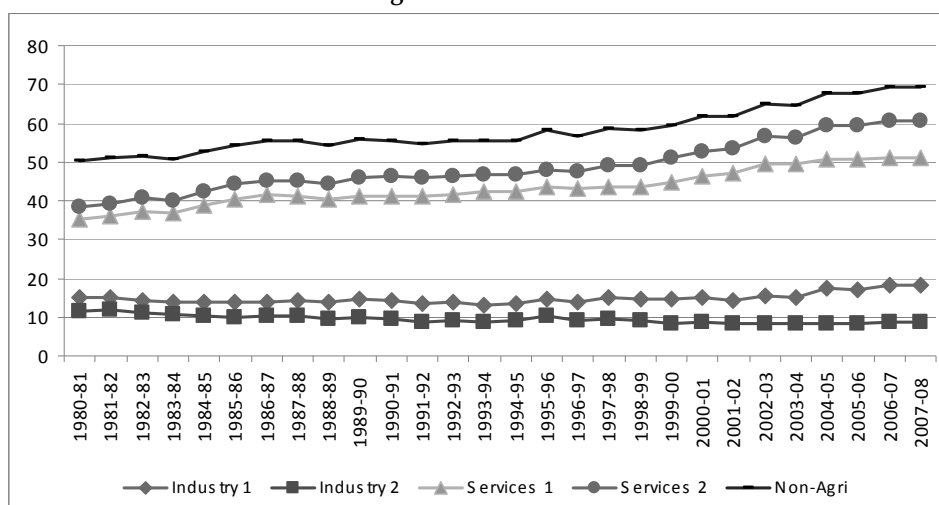


Till the mid-1960s, previous 15-year industrial growth rates were much higher than that of services. The gap started closing thereafter as the industrial growth rate fell more sharply and more or less disappeared by the mid- to late 1970s. Both then moved in tandem till the mid-1990s after which preceding 15-year period industrial growth rates tapered off and were left far behind by the corresponding services growth rates. In other words, the tilt towards a more service dominated growth trajectory after 1980 was further reinforced from the mid-1990s. This only serves to emphasize that the period up to the mid-1960s was the only proper phase of an *industry* driven process of growth and structural change which took the Indian economy out of the stagnation characteristic of the colonial era. The beginning of the end of this process or its slow unwinding, and not a mere slowing down of industrial growth, was thus heralded by the crisis of the mid-1960s.

## 5. Services Dominated Growth: The Transition from Public to Private Sector Led

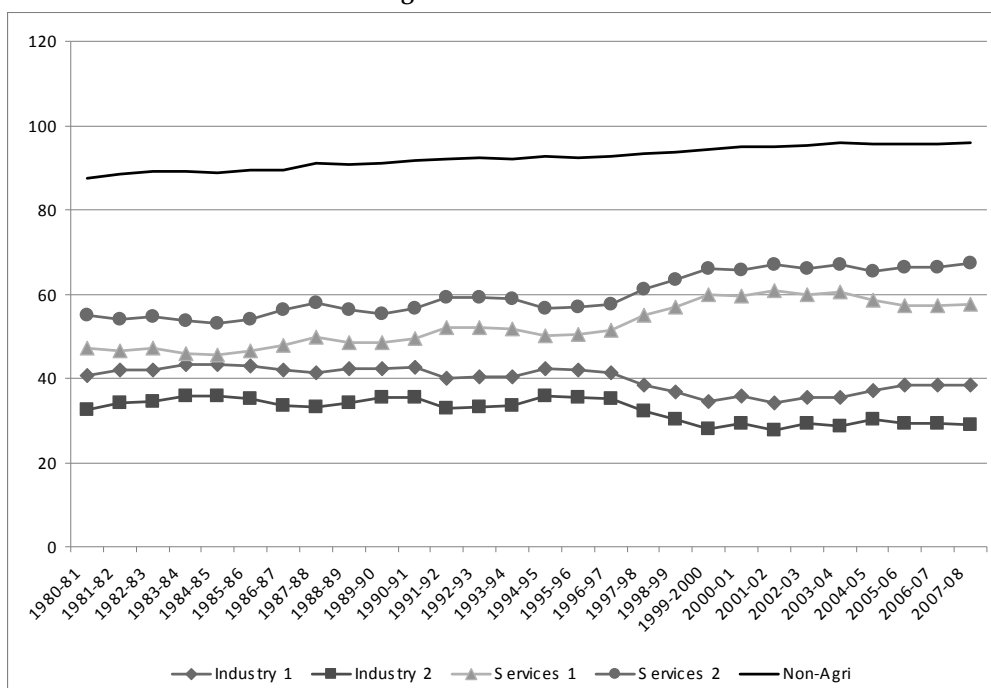
The shift towards a more services dominated pattern of growth and structural change after 1980 did not initially reflect the emergence of a trend of an increasing importance of services relative to industry in every institutional segment of the Indian economy. Only in the case of the unorganized sector can one observe a more or less consistent but slow trend of relative deindustrialization of its output (NDP), and an increasing share of services, since 1980 (Figure 10). Figures 11 to 13 reveal, however, that no similar trend was displayed for a decade and a half after 1980 by either the organized sector as a whole or its public and private components individually. The decisive shift of the output composition towards services seems to have occurred in both of them only in the early to mid-1990s.

Figure 10  
Distribution of Unorganized Sector NDP at Current Prices



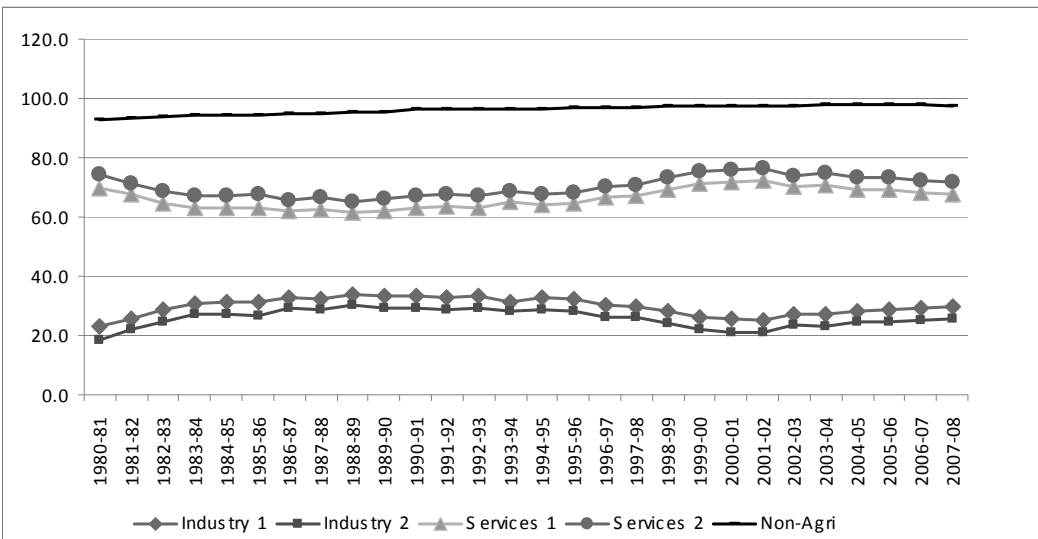


**Figure 11**  
**Distribution of Organized Sector NDP at Current Prices**

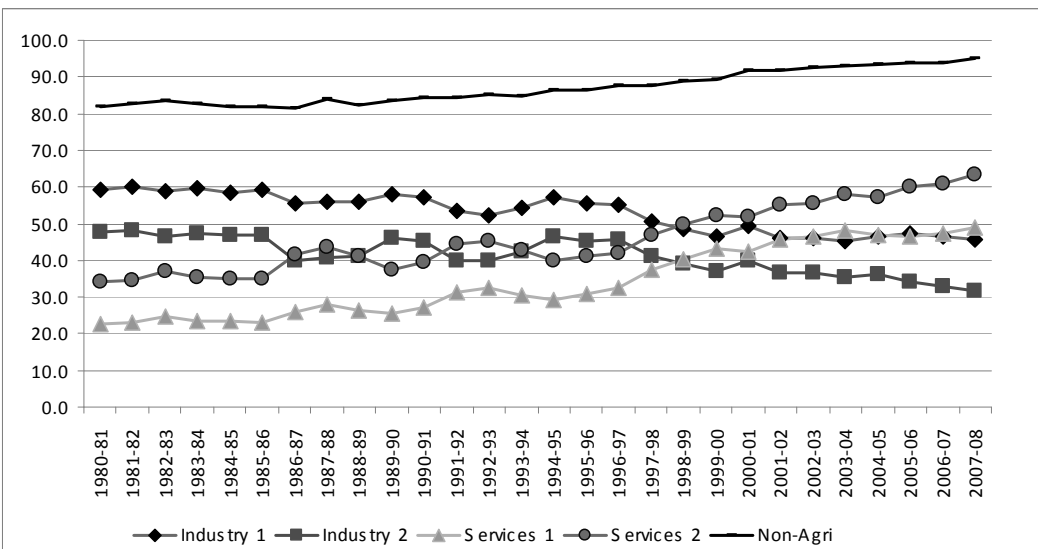


As far as the public sector is concerned, the trend in the 1980s, if anything, was in the opposite direction with the share of industry increasing. A slow rise of the share of services in the private organized NDP in the 1980s, more however at the expense of its agricultural rather than industrial segment, is more perceptible. However, while services accounted for an overwhelming share of public sector NDP both before and after the 1980s, in private organized NDP a dramatic reversal took place in the shares of services and industry in the 1990s. Till the mid-1990s, the industrial sector accounted for a significantly greater share of private organized NDP than did services. But sharply opposite movements in these shares thereafter decisively reversed the position in just a few years. Industry 2's share in private organized NDP, which was nearly 48% in 1980–81 and still over 45% in the mid-1990s, fell to just above 31% by 2007–08. In contrast, Services 2 increased its share from around 40% in the mid-1990s to over 63% by 2007–08.

**Figure 12**  
**Shares in Public Sector NDP**

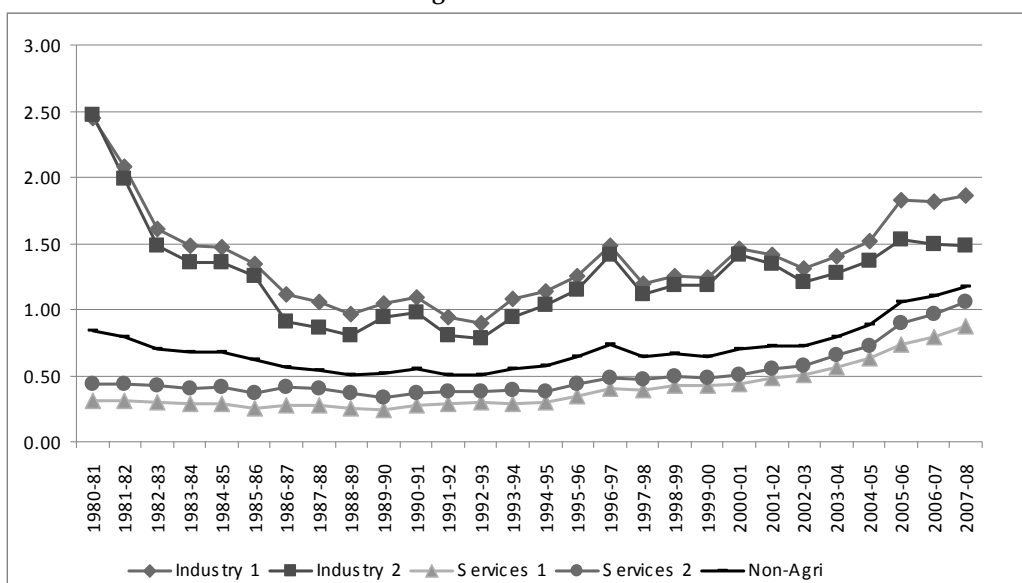


**Figure 13**  
**Shares in Private Organized NDP**



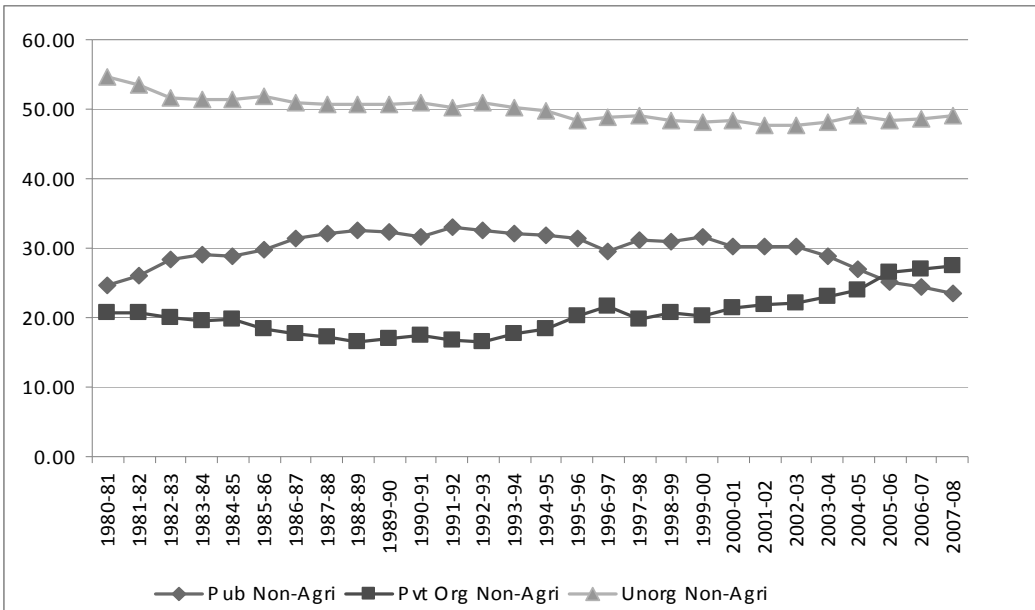
When one is considering the organized sector, one very important difference between the 1980s and the 1990s is with regard to how the relative sizes of its public and private components moved in the two periods. In the 1980s, the private sector share was falling in industry and in services (Figure 14). This trend was, however, decisively reversed after 1991.

**Figure 14**  
**Ratio of Private Organized NDP to Public Sector NDP**

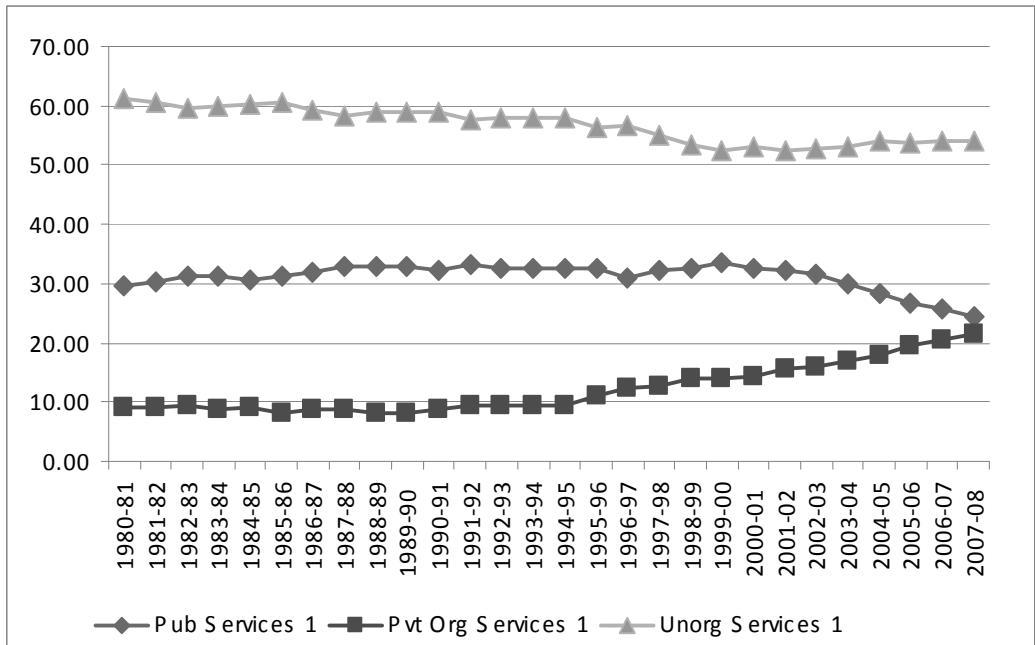


The picture that then emerges is that the shift towards a services dominated pattern of growth and structural change after 1980 went through two different stages. In the 1980s and the early 1990s, the trend of the increasing importance of services relative to industry was primarily attributable to the increasing importance of the public sector in the economy. Though public sector output was not de-industrializing over this period, the share of services in public sector output was consistently significantly greater than in the economy's aggregate output. Consequently as the public sector share in aggregate output increased, it also pushed up the overall share of services. On the other side, whatever little trend there was towards the rising share of services in the non-agricultural output of both the unorganized sector and the private organized sector in the 1980s had little effect on the overall share of services because the share of these sectors in non-agricultural NDP was declining at the same time (Figure 15). The share of services increased after the mid-1990s in the non-agricultural output of all the three institutional segments. Between the early and mid-1990s, however, the private organized sector replaced the public sector as the segment increasing its share in non-agricultural NDP. At the same time the private organized sector made its decisive shift towards services. As shown by Figures 16 and 17, the private organized sector began to rapidly increase its share in services NDP too. Thus, rapid growth of private organized output and the increasing share of services in it were the key factors reinforcing the services dominated growth trajectory after the mid-1990s.

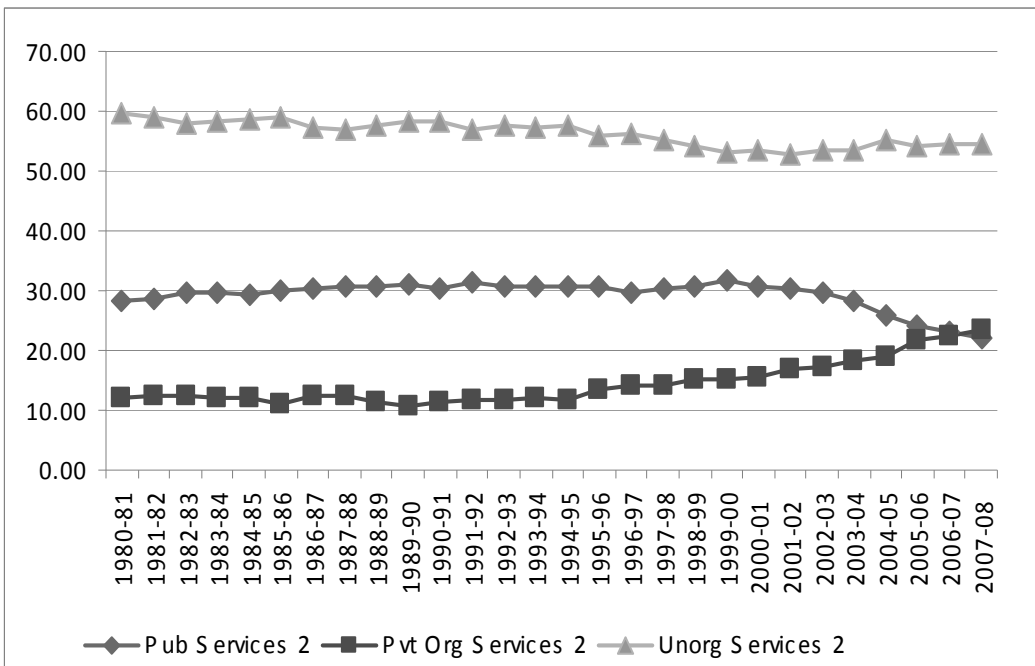
**Figure 15**  
**Shares in Non-Agricultural NDP**



**Figure 16**  
**Shares in Services 1 NDP**

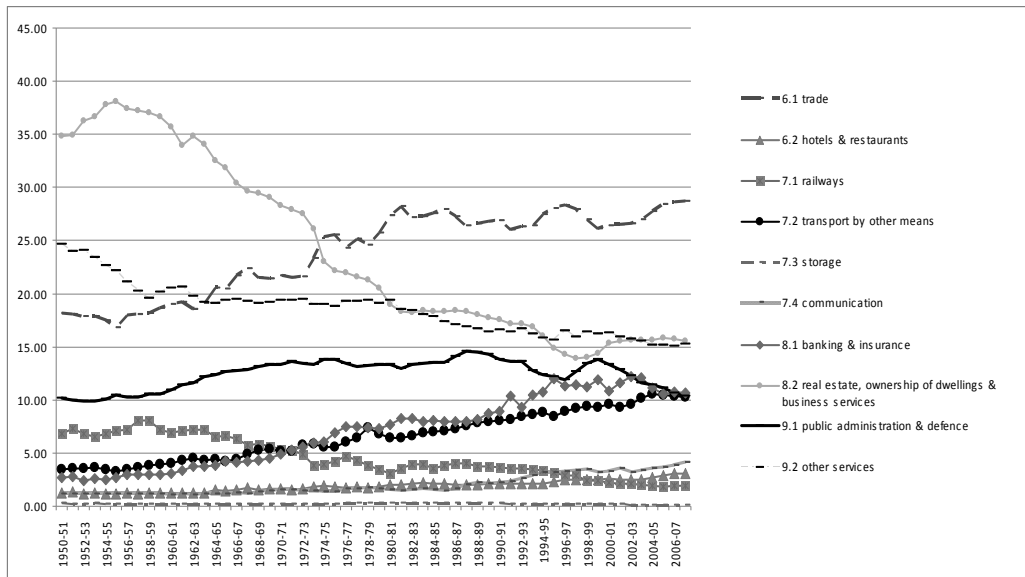


**Figure 17**  
**Shares in Services 2 NDP**

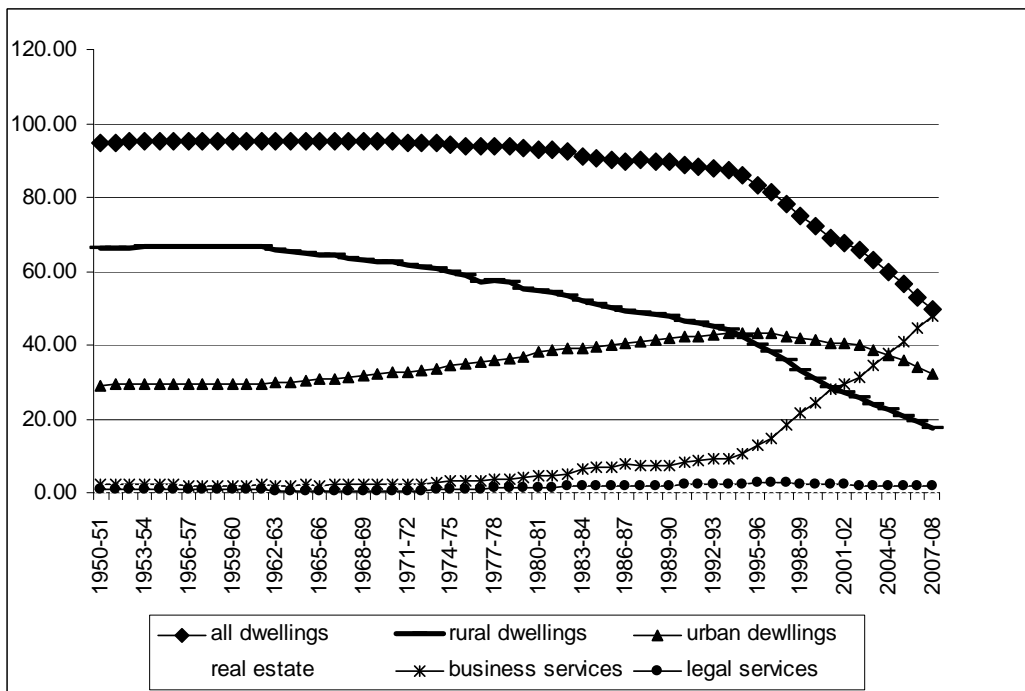


The shift from a public sector led to a private organized sector led growth pattern was also reflected in some changes in the kinds of services driving growth. As Figure 18 shows, the relative shares of most of its components in services output exhibit relatively steady long-term trends. Thus, while the share of railways has been declining for decades, that of transport by other means has increased. Other services like trade, and banking and insurance, have been also steadily increasing in importance. Noticeably, however, the share of public administration and defence, which had been steadily increasing till the end of the 1980s, experienced a reversal thereafter. Real estate, ownership of dwellings and business services exhibits, however, the opposite kind of reversal. This is primarily due to the rapid growth of business services since the early 1990s (Figure 19), which is a known area of rapid private sector growth. Another such area of major private sector activity is communication, which too has grown rapidly in recent times. As shown in Figure 20, beginning from a situation where there was a public sector monopoly in communication at the beginning of the 1990s, the private sector share has now become twice that of the public sector. However, the NAS data suggests that much of this growth of the private sector in communication services is through its unorganized rather than organized segment.

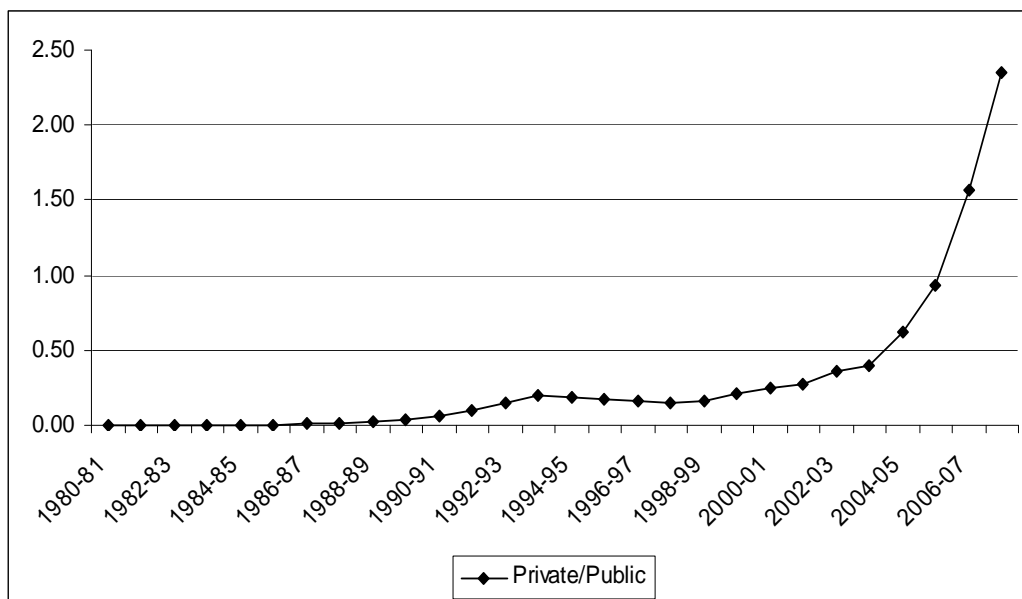
**Figure 18**  
**Distribution of Services 1 GDP at Current Prices**



**Figure 19**  
**Distribution of GDP at Current Prices from Real estate, Ownership of Dwellings and Business Services**



**Figure 20**  
**Ratio of Private Sector GDP to Public Sector GDP at Current Prices in Communication**



## 6. Phases of Growth and Structural Change: A Summing Up

Drawing together everything discussed above, one can say that the post-independence process of growth and structural change in India has gone through four phases:

- **Phase 1: Independence to Mid-1960s** – Acceleration in growth and structural change driven chiefly by the industrial sector.
- **Phase 2: Mid-1960s to 1980** – Slackening of the momentum of industrial growth and the winding down of the Phase 1 trajectory.
- **Phase 3: 1980 to Early and Mid-1990s** – Second stage growth acceleration accompanied by shift towards services dominated growth. Rising share of public sector as the main source of increasing share of services in GDP.
- **Phase 4: Mid-1990s onwards** – Private Organized sector led decisive reinforcement of services dominated growth trajectory.

This periodization of India's post-independence economic history points towards the importance of going beyond relating the dynamics of the Indian economy to the degree to which the prevalent economic policy regime was interventionist or liberal in different periods. Let us see some of the reasons why.

The history of an industrial sector driven process of growth acceleration and structural change was a very short one in India, limited to the decade and a half right at the beginning of our reference period. The policy regime at that time was interventionist, and it remained so even as the momentum of industrialization ebbed. Industrialization, however, continued to remain held back despite subsequent liberalization in policy and even the transition from an agriculture dominated to services dominated economy. That is what makes the mid-1960s turning point one of the most significant ones in the history of Indian industrialization. Clearly India's limited industrialization is a long-term story related to constraints embedded in her economic structure, which neither the actual interventions nor liberalization have been able to eliminate. It is these constraints that need to be investigated if we are to move towards properly understanding the peculiarity of Indian economic change.

The acceleration in trend growth after 1980 only re-emphasizes this peculiarity. It was associated with another break with the pattern of the previous three decades in the form of a shift towards the increasing service orientation of non-agricultural growth. In other words, it was in services growth rather than industrial growth that a long-term transition occurred. How and why did such a transition occur? Why did the constraints that continued to impede industrialization not prevent this transition in the case of services? Equally, why did the rapid growth of services not itself spur a more rapid industrialization process? These are some of the important questions posed by the post-1980 experience of growth and structural change.

Explaining accelerated growth after 1980 as a consequence of liberalization of economic policy has always confronted one major problem. This is the absence of any significant upward shift in the trend growth rate of the Indian economy to the decidedly more major liberalization of the 1990s. The fact that this acceleration was not rooted in industrialization but rather a shift towards services only adds to the difficulties of policy shift based explanations, at least of the usual kind. This is especially because the initial service orientation of growth related to an expanding public sector, which negates even the story of the 1980s being the result of an increasing 'pro-business' orientation as a prelude to the 'pro-market' orientation after 1991. In fact, it is hard to separate the pre- and post-1991 growth phases on a pro-business versus pro-market basis. The most important breaks between the first to the second are actually the shift from public sector to private sector driven growth of services, and the decisive shift of the private organized sector towards services. Thus, the private sector role in growth becomes prominent from the mid-1990s, but it only reinforced an already existing tendency towards services-dominated growth. Moreover, given the direct and indirect role of the public sector in the development of many of the areas of rapid service growth, there may exist other



deeper continuities between the 1980s and later. Further, the roots of such a public sector role may even lie in the interventions of even the pre-1980 period.

All these, of course, do not suggest that state economic policy was unimportant or irrelevant to the Indian story of economic change. They do, however, remind us that economic contexts with which are associated definite tendencies cannot be defined or distinguished merely or primarily by whether the prevailing policy regime has an interventionist or a liberal essence. Neither kind of policy succeeded in ensuring India's full-fledged industrialization, but both appear to have played a role in fuelling or facilitating the exceptional expansion of services. Insofar as this somewhat paradoxical combination of tendencies has been the hallmark of the Indian story of output growth and structural change after independence, a simple policy-regime centred explanation of that story is clearly inadequate.

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